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THE GIFT OF

Miss Ellen Lang Wentworth
of Exeter, New Hampshire

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ANSWERS

TO THE

PROBLEMS IN WENTWORTH AND HILL'S

EXERCISES IN ARITHMETIC.

Part I.: Exercise Manual.

Part II.: Examination Manual.

BOSTON, U.S.A.:
PUBLISHED BY GINN & COMPANY.
1900

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PART FIRST.

ANSWERS TO EXERCISE MANUAL.

CHAPTER I.

1. 231.	**24.** 334.	**46.** 2439.	**68.** 3763.
2. 315.	**25.** 233.	**47.** 22,450.	**69.** 3781.
3. 246.	**26.** 316.	**48.** 27,653.	**70.** 19,236.
4. 258.	**27.** 271.	**49.** 24,625.	**71.** 24,715.
5. 262.	**28.** 320.	**50.** 22,184.	**72.** 26,059.
6. 262.	**29.** 203.	**51.** 22,666.	**73.** 26,299.
7. 305.	**30.** 231.	**52.** 20,719.	**74.** 38,617.
8. 278.	**31.** 244.	**53.** 29,331.	**75.** 34,702.
9. 232.	**32.** 153.	**54.** 25,801.	**76.** 209,040.
10. 150.	**33.** 262.	**55.** 132,975.	**77.** 97,684.
11. 149.	**34.** 295.	**56.** 124,472.	**78.** 25,112.
12. 376.	**35.** 307.	**57.** 2,345,954.	**79.** 31,466.
13. 261.	**36.** 229.	**58.** 1,961,867.	**80.** 144,936.
14. 344.	**37.** 835.	**59.** 774,623.	**81.** 146,181.
15. 196.	**38.** 1399.	**60.** 25,725,922.	**82.** 1,943,369.
16. 217.	**39.** 2164.	**61.** 25,450,431.	**83.** 439,761.
17. 200.	**40.** 1904.	**62.** 37,304,555.	**84.** 1,177,809.
18. 276.	**41.** 1817.	**63.** 35,204,466.	**85.** 349,075.
19. 231.	**42.** 2179.	**64.** 24,749,386.	**86.** 1,484,942.
20. 222.	**43.** 1618.	**65.** 3006.	**87.** 680,413.
21. 211.	**44.** 2239.	**66.** 2812.	**88.** 23,214,452
22. 307.	**45.** 2647.	**67.** 2517.	**89.** 23,493,588.
23. 225.			

		Area.	*Population.*
90.	North Atlantic States,	162,065	14,507,407
91.	South Atlantic States,	268,620	7,597,197
92.	North Central States,	753,550	17,364,111
93.	Southern Central States,	540,385	8,859,371
94.	Western States and Territories,	1,175,550	1,767,697
95.	The United States,	2,900,170	50,095,783

96. 325. **97.** $730. **101.** $135,345. **103.** 1754.
98. 1,772,962. **102.** Horse, $552; colt, $238; both, $790. **104.** 10,973 lbs.
99. 36,273; 69,686. **105.** $936.
100. 72,447.
106. 160; 180; 170; 324; 186; 510.
107. 306; 341; 334; 313; 1294; 673; 546; 75.
108. 3240; 3649; 2817; 3490; 13196.
109. Miles: 44, 98, 124, 160, 199, 236; 37, 76, 112, 138, 192, 236.
Minutes: 96, 174, 46, 116, 188, 246.
110. 245; 539; 56; 840.
111. 3077.
112. $6.90; $19.55.
113. 293; 8836; $697.
114. 1054; 1631; $66.56.
115. Red wine, 36,454; value, $24,220.
White wine, 21,974; value, $12,878.
116. 1242, 1104, 1044, 1342; 2330, 654, 1748, 4732.
117. i. 309; ii. 2911; iii. 11,087; iv. 181,521; v. 4,093,705.
118. i. 393; ii. 907; iii. 12,013; iv. 107,233; v. 1,281,403.
119. i. 189; ii. 872; iii. 3009; iv. 257,709; v. 1,892,109.
120. i. 623; ii. 1681; iii. 10,739; iv. 259,249; v. 2,641,102.
121. i. 323; ii. 121; iii. 10,214; iv. 311,532; v. 2,642,768.
122. i. 426; ii. 1505; iii. 19,335; iv. 111,658; v. 81,629.
123. i. 236; ii. 3461; iii. 43,548; iv. 458,639; v. 2,590,235.
124. i. 329; ii. 3682; iii. 11,727; iv. 186,954; v. 243,141.
125. i. 359; ii. 4458; iii. 41,408; iv. 357,829; v. 421,755
126. i. 173; ii. 5789; iii. 22,388; iv. 708,289; v. 101,018.
127. 8889. **129.** 13,774.
128. 1112. **130.** 33,689.

131.	27,854.	**144.**	183,789.	**157.**	357,847.	**170.**	337,766.
132.	65,727.	**145.**	188,872.	**158.**	123,768.	**171.**	57,746.
133.	25,419.	**146.**	382,418.	**159.**	237,178.	**172.**	596,208.
134.	11,637.	**147.**	236,573.	**160.**	13,438.	**173.**	376,753.
135.	24,148.	**148.**	158,438.	**161.**	61,847.	**174.**	276,763.
136.	43,284.	**149.**	556,315.	**162.**	52,366.	**175.**	236,647.
137.	25,558.	**150.**	529,124.	**163.**	31,445.	**176.**	366,168.
138.	13,555.	**151.**	518,268.	**164.**	11,067.	**177.**	581,348.
139.	32,858.	**152.**	117,037.	**165.**	45,447.	**178.**	234,449.
140.	443,565.	**153.**	335,649.	**166.**	44,308.	**179.**	346,347.
141.	147,183.	**154.**	261,538.	**167.**	63,475.	**180.**	495,220.
142.	376,107.	**155.**	456,559.	**168.**	44,286.	**181.**	414,329.
143.	348,759.	**156.**	433,647.	**169.**	22,652.	**182.**	223,449.

183. 264,747.
184. 414,753.
185. $181,428; $1,273,676.
186. $147,617; $845,183.
187. $44,064; $615,171.
188. $406,593; $637,083.
189. $755,681; $1,945,043.
190. $82,652; $335,140.
191. $122,921; $1,288,441.
192. $266,164; $405,428.
193. 72,714; 119,306; 192,020.
194. 136,641; 264,007; 400,648.
195. 129,438; 170,564; 300,002.
196. 111,493; 173,148; 284,641.
197. 54,936; 64,959; 119,895.
198. 48,077; 38,094; 86,171.
199. 55,195; 38,900; 94,095.
200. 189,037; 204,888; 393,925.
201. 150,091; 39,654; 189,745.
202. 22,743; 24,672; 47,415.
203. 92,671; 84,386; 177,057.
204. 685,670; ; 542,670.
205. 743,174; 57,504; 519,174.
206. 819,341; 76,167; 641,697.
207. 918,345; 99,004; 663,611.
208. 942,890; 24,545; 790,144.
209. 8 tons of hay; 59 bushels of corn; 97 bushels of oats.
210. 26 bushels of corn; 36 bushels of rye; 89 bushels of oats.
211. 147 cords of oak; 241 cords of maple; 243 cords of pine.
212. Tuesday, 819; 420; 178. Wednesday, 588; 202; 105. Thursday, 321; 178; 60.
213. 47.
214. $239.
215. 37,519.
216. 5791.
217. 139,806 feet.
218. 435 years.
219. 761,459.
220. 9.
221. 193 gallons.
222. 14 years.
223. $2.
224. Hay, 13 tons; corn, 123 bushels; oats, 81 bushels.
225. 3,555,552.
226. 1,711,135.
227. 2,841,822.
228. 2,960,244.
229. 3,828,288.
230. 3,117,213.
231. 3,883,116.
232. 2,992,752.
233. 3,749,895.
234. 5,129,696.
235. 3,957,184.
236. 6,474,015.
237. 3,373,133.
238. 6,096,624.
239. 3,460,275.
240. 5,791,152.
241. 4,435,090.
242. 5,291,330.
243. 3,130,486.
244. 2,918,300.
245. 3,233,436.
246. 3,240,692.
247. 2,334,695.
248. 3,542,409.
249. 778,918.
250. 653,723.
251. 3,577,926.
252. 1,408,008.
253. 1,492,010.
254. 1,316,861.
255. 90,138,702.
256. 481,091,298.
257. 441,176,008.
258. 429,424,006.
259. 337,242,702.
260. 299,998,922.
261. 254,345,052.
262. 276,060,835.
263. 343,142,710.
264. 220,122,468.
265. 255,060,384.
266. 135,075,556.
267. 321,264,009.
268. 335,017,683.
269. 456,918,392.
270. 145,929,618.
271. 366,693,723.
272. 362,141,178

273.	148,431,875.	**309.**	5,440,964,088.	**345.**	20,597,000.
274.	281,631,504.	**310.**	7,502,979,520.	**346.**	38,463,600.
275.	230,863,776.	**311.**	1,927,221,212.	**347.**	239,472,200.
276.	265,455,063.	**312.**	1,267,957,712.	**348.**	204,415,200.
277.	792,550,944.	**313.**	3,102,917,970.	**349.**	6,688,246,400.
278.	638,156,744.	**314.**	2,880,605,511.	**350.**	2,319,138,000.
279.	430,143,168.	**315.**	2,786,809,636.	**351.**	83,220,000.
280.	777,566,496.	**316.**	4,307,389,140.	**352.**	41,268,000.
281.	2,441,869,222.	**317.**	2,764,965,692.	**353.**	123,648,000.
282.	721,611,716.	**318.**	387,802,377.	**354.**	126,672,000.
283.	3,046,765,632.	**319.**	3,910,988,005.	**355.**	489,445,000.
284.	1,416,812,768.	**320.**	6,204,482,220.	**356.**	156,695,000.
285.	2,056,718,214.	**321.**	4,405,558,272.	**357.**	30,997,910,000.
286.	1,742,280,501.	**322.**	2,436,393,500.	**358.**	304,920,000.
287.	637,828,128.	**323.**	1,193,020,640.	**359.**	8,084,120,000.
288.	1,850,096,034.	**324.**	5,782,463,542.	**360.**	5,299,160,000.
289.	2,130,957,437.	**325.**	8,439,393,200.	**361.**	3,152,880,000.
290.	1,732,291,656.	**326.**	2,804,741,400.	**362.**	4,532,150,000.
291.	2,204,889,344.	**327.**	1,316,861,000.	**363.**	3,591,040,000.
292.	4,786,801,185.	**328.**	7,615,588,200.	**364.**	2,323,420,000.
293.	2,223,850,192.	**329.**	5,494,972,100.	**365.**	2,122,050,000.
294.	4,003,306,068.	**330.**	6,860,484,000.	**366.**	3,629,680,000.
295.	5,588,990,200.	**331.**	3,592,212,000.	**367.**	2,815,560,000.
296.	2,750,154,735.	**332.**	6,205,273,700.	**368.**	2,517,840,000.
297.	2,895,487,110.	**333.**	1,218,240.	**369.**	2,533,500,000.
298.	1,945,213,844.	**334.**	847,680.	**370.**	3,824,800,000.
299.	1,029,375,610.	**335.**	15,771,330.	**371.**	28,599,300,000
300.	3,132,130,750.	**336.**	23,796,960.	**372.**	42,602,000,000.
301.	2,033,711,104.	**337.**	268,474,230.	**373.**	300,477,600,000.
302.	2,441,941,047.	**338.**	261,563,120.	**374.**	239,664,700,000.
303.	2,149,159,812.	**339.**	14,769,000.	**375.**	50,064,000,000.
304.	4,588,223,619.	**340.**	33,080,950.	**376.**	195,818,000,000.
305.	4,008,345,863.	**341.**	295,808,760.	**377.**	97,403,000,000.
306.	2,552,188,023.	**342.**	488,404,080.	**378.**	835,807,000,000.
307.	3,982,024,228.	**343.**	4,073,579,670.	**379.**	145,176,000,000.
308.	612,596,115.	**344.**	4,093,510,900.	**380.**	471,582,000,000

381. 3,996,915,833.
382. 246,204,228,753.
383. 496,315,863,808.
384. 153,288,487,686.
385. 3,736,889,200.
386. 2,460,168,000.
387. 3,258,198,090.
388. 63,683,564,000.
389. 31,540,320,000.
390. 54,248,324,832.
391. 1,977,048,000.
392. 3,755,456,400.
393. $2.50; $25; $250; $1000; $2000.
394. 420; 2520; 25,200; 504,000.
395. 20,000; 100,000; 1,000,000; 200,000,000.
396. 24,300; 34,020; 38,880; 43,740.
397. $326,862.
398. 97,782.
399. $410,400.
400. $22.
401. 57,096.
402. $592,230.
403. 1424.
404. 231.
405. 60,000.
406. 88,800,000.
407. 3888.
408. 2880.
409. $252; $144; $396.
410. 64,768.
411. 124,416.
412. 720; 8760; 80,424.
413. $1920.

	Quo.	Rem.		Quo.	Rem.		Quo.	Rem.		Quo.	Rem.
415.	18.		**436.**	19	1.	**457.**	48	6.	**478.**	824	3.
416.	15.		**437.**	29	1.	**458.**	96	4.	**479.**	938	5.
417.	17.		**438.**	19	4.	**459.**	84	6.	**480.**	1426	2.
418.	15.		**439.**	431.		**460.**	145	3.	**481.**	929	3.
419.	14.		**440.**	238.		**461.**	163	4.	**482.**	575	4.
420.	13.		**441.**	219.		**462.**	120	5.	**483.**	1158	1.
421.	9.		**442.**	168.		**463.**	4687.		**484.**	793	1.
422.	10.		**443.**	147.		**464.**	2615.		**485.**	465	2.
423.	17.		**444.**	125.		**465.**	2434.		**486.**	376	1.
424.	23.		**445.**	48.		**466.**	1367.		**487.**	2686.	
425.	29.		**446.**	79.		**467.**	1357.		**488.**	2849.	
426.	19.		**447.**	89.		**468.**	1286.		**489.**	1295.	
427.	36	1.	**448.**	117.		**469.**	847.		**490.**	1949.	
428.	16	1.	**449.**	215.		**470.**	468.		**491.**	945.	
429.	14	1.	**450.**	315.		**471.**	993.		**492.**	1219.	
430.	16	2.	**451.**	357	1.	**472.**	570.		**493.**	2391	1.
431.	11	3.	**452.**	147	2.	**473.**	590.		**494.**	2875	1.
432.	11	2.	**453.**	68	3.	**474.**	457.		**495.**	2395	1.
433.	11	7.	**454.**	82	2.	**475.**	2968	1.	**496.**	1478	4.
434.	4	3.	**455.**	69	5.	**476.**	1976	2.	**497.**	1387	3.
435.	12	3.	**456.**	84	4.	**477.**	928	3.	**498.**	719	6

	Quo.	Rem.		Quo.	Rem.		Quo.	Rem.		Quo.	Rem.
499.	4718	1.	**500.**	2589	1.	**501.**	3196.		**502.**	4382	1.
	3145	2.		1726	1.		2130	2.		2921	2.
	2359	1.		1294	3.		1598.			2191	1.
	1887	2.		1035	4.		1278	2.		1753.	
	1572	5.		863	1.		1065	2.		1460	5.
	1348	1.		739	6.		913	1.		1252	1.
	1179	5.		647	3.		799.			1095	5.
	1048	5.		575	4.		710	2.		973	8.

	Quo.	Rem.		Quo.	Rem.		Quo.	Rem.		Quo.	Rem.
503.	239	11.	**504.**	339	3.	**505.**	478	12.	**506.**	416	7.
	159	21.		226	3.		319	2.		277	17.
	119	31.		169	23.		239	12.		208	7.
	95	41.		135	33.		191	22.		166	27.
	79	51.		113	3.		159	32.		138	47.
	68	31.		96	63.		136	52.		118	67.
	59	71.		84	63.		119	52.		104	7.
	53	21.		75	33.		106	32.		92	47.

	Quo.	Rem.		Quo.	Rem.		Quo.	Rem.		Quo.	Rem.
507.	48	159.	**508.**	48	84.	**509.**	49	185.	**510.**	47	164.
	32	159.		32	84.		33	85.		31	264.
	24	159.		24	84.		24	385.		23	364.
	19	259.		19	184.		19	485.		19	64.
	16	159.		16	84.		16	385.		15	564.
	13	659.		13	584.		14	185.		13	464.
	12	159.		12	84.		12	385.		11	764.
	10	759.		10	684.		11	85.		10	564.

	Quo.	Rem.		Quo.	Rem.		Quo.	Rem.		Quo.	Rem.
511.	118	34.	**522.**	87	82.	**533.**	1902	3.	**544.**	5268	11.
512.	64	15.	**523.**	2827	17.	**534.**	1293	55.	**545.**	5315	8.
513.	81	70.	**524.**	3027	8.	**535.**	847	40.	**546.**	2988	17.
514.	93	4.	**525.**	915	29.	**536.**	881	58.	**547.**	12652	12.
515.	356	13.	**526.**	473	41.	**537.**	897	20.	**548.**	23588	13.
516.	261	3.	**527.**	1342	47.	**538.**	913	93.	**549.**	9041	34.
517.	117	7.	**528.**	629	21.	**539.**	3299	7.	**550.**	8656	32.
518.	69	31.	**529.**	892	30.	**540.**	1171	9.	**551.**	47388	5.
519.	103	57.	**530.**	527	49.	**541.**	4056	5.	**552.**	23532	9.
520.	124	38.	**531.**	3834	24.	**542.**	4526	5.	**553.**	8698	20.
521.	66	61.	**532.**	1678	19.	**543.**	4934	12.	**554.**	18227	17

	Quo.	Rem.
555.	7427	8.
556.	7383	36.
557.	44600	13.
558.	25342	11.
559.	6627	22.
560.	14851	51.
561.	6301	54.
562.	6436	72.
563.	42122	17.
564.	19379	14.
565.	5353.	
566.	12531	21.
567.	5472	48.
568.	5705	40.
569.	39905	18.
570.	18303	3.
571.	823	93.
572.	315	38.
573.	106	165.
574.	82	22.
575.	223	83.
576.	133	158.
577.	83	399.
578.	47	143.
579.	123	490.
580.	114	124.
581.	83	781.
582.	97	901.
583.	125	221.
584.	78	494.
585.	77	548.
586.	112	637.
587.	71	15.
588.	152	101.
589.	66	201.

	Quo.	Rem.
590.	124	581.
591.	27	597.
592.	19	719.
593.	95	893.
594.	46	635.
595.	2145	96.
596.	2724	309.
597.	708	637.
598.	1143	370.
599.	993	466.
600.	1663	168.
601.	1607	272.
602.	1682	237.
603.	704	245.
604.	867	508.
605.	80.	
606.	18.	
607.	1953.	
608.	2500.	
609.	2200.	
610.	45.	
611.	3.	
612.	27.	
613.	$24; $2.	
614.	140.	
615.	65.	
616.	480.	
617.	16.	
618.	150.	
619.	$12,345.	
620.	57.	
621.	18.	
622.	$48.	
623.	$60.	
624.	38.	

625. 72.
626. $2.50.
627. 285.
628. 32.
629. 340,898.
630. 28 bu.; 34 cts.
631. $42; $414.
632. 1140.
633. 43 States, and 965 sq. mi. over
634. 5 States, and 24,190 sq. mi. over.
635. 30,303.
636. 18; 30.
637. $7.94.

	Yield.	Value.
638.	1538;	$0.15.
639.	1173;	$0.10.
640.	705;	$0.07.
641.	660;	$0.08.
642.	565;	$0.09.
643.	665;	$0.07.
644.	630;	$0.09.
645.	1085;	$0.06.
646.	198;	$0.10.
647.	185;	$0.11.
648.	163;	$0.10.
649.	142;	$0.09.
650.	154;	$0.10.
651.	172;	$0.10.
652.	230;	$0.09.
653.	215;	$0.10.
654.	203;	$0.09.

655. 1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47.
656. 53, 59, 61, 71, 73, 79, 83, 89, 97.
657. 101, 103, 107, 109, 113, 127, 131, 137, 139, 149.

658. 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199.
659. 211, 223, 227, 229, 233, 239, 241.
660. 251, 257, 263, 269, 271, 277, 281, 283, 293.
661. 307, 311, 313, 317, 331, 337, 347, 349.
662. 353, 359, 367, 373, 379, 383, 389, 397.
663. 401, 409, 419, 421, 431, 433, 439, 443, 449.
664. 457, 461, 463, 467, 479, 487, 491, 499.
665. 503, 509, 521, 523, 541, 547.
666. 557, 563, 569, 571, 577, 587, 593, 599.
667. 601, 607, 613, 617, 631, 641, 643, 647.
668. 653, 659, 661, 673, 677, 683, 691.
669. 701, 709, 719, 727, 733, 739, 743.
670. 751, 757, 761, 769, 773, 787, 797.
671. 809, 811, 821, 823, 827, 829, 839.
672. 853, 857, 859, 863, 877, 881, 883, 887.
673. 907, 911, 919, 929, 937, 941, 947.
674. 953, 967, 971, 977, 983, 991, 997.

675. $3^3 \times 5^2$.
676. $3^2 \times 5 \times 7$.
677. $2^3 \times 7^2$.
678. $3^3 \times 7^2$.
679. $3^2 \times 5 \times 11$.
680. $2^3 \times 7 \times 11$.
681. $2^3 \times 11^2$.
682. $3^3 \times 11^2$.
683. $3^4 \times 5$.
684. $2^6 \times 7$.
685. $2^3 \times 3^2 \times 7$.
686. $2^5 \times 3 \times 7$.
687. $2^6 \times 11$.
688. $2^2 \times 3^3 \times 7$.
689. $2^3 \times 3^2 \times 11$.
690. $2^5 \times 3 \times 11$.
691. $2^4 \times 3 \times 5$.
692. 2×3^5.
693. 3^6.
694. $2^8 \times 3$.
695. $2^6 \times 3 \times 5$.
696. $2^7 \times 3^3$.
697. $2^4 \times 3^4$.
698. $2^6 \times 3^3$.
699. $2^6 \times 5 \times 7$.
700. $2^3 \times 7 \times 29$.
701. $3^2 \times 5^2 \times 13$.
702. $2 \times 7^2 \times 23$.
703. $3^2 \times 7^3 \times 23$.
704. 13×97.
705. $3 \times 5^2 \times 23$.
706. $3 \times 5^2 \times 367$.
707. $2^3 \times 3 \times 7 \times 67$.
708. $3^2 \times 23 \times 421$.
709. $2^3 \times 3 \times 7^2$.
710. $2 \times 5^3 \times 11$.
711. $5 \times 7 \times 73$.
712. $3 \times 5 \times 11 \times 47$.
713. $2^3 \times 3^2 \times 7 \times 11$.
714. $3 \times 7 \times 19^2$.
715. 19.
716. 40.
717. 2.
718. 4.
719. 5.
720. 493.
721. 39.
722. 2.
723. 30.
724. 16.
725. 12.
726. 29.
727. 13.
728. 36.
729. 48.
730. 58.
731. 25.
732. 3.
733. 31.
734. 113.
735. 429.
736. 111.
737. 83.
738. 16.
739. 213.
740. 101.

741. 27.
742. 113.
743. 26.
744. 99.
745. 7.
746. 52.
747. 2.
748. 840.
749. 432.
750. 1428.
751. 1680.
752. 840.
753. 2160.
754. 5400.
755. 2520.
756. 2520.
757. 16,800.
758. 17,640.
759. 1800.
760. 3360.
761. 27,720.
762. 23,800.
763. 1260.
764. 42,840.
765. 432.
766. 1200.
767. 1920.
768. 3556.
769. 6204.
770. 4092.
771. 1560.
772. 25,200.
773. 5850.
774. 108,506.
775. 13,600.
776. 64,575.
777. 18,018.
778. 3146.
779. 2352.
780. 42,840.
781. 36,400.
782. 22,176.
783. 278,400.
784. 22,176.
785. 4956.
786. 12,863,760.
787. 166,320.

Miscellaneous.

788. $72; $7200; $28,800.
789. $359,640.
790. $56.
791. $2.
792. 733,266.
793. Gain, $180.
794. $30.
795. $1.44.
796. 4,192,272.
797. $456.
798. $8.86.
799. $402,050.
800. $580.
801. $2868.
802. $739.
803. 651 animals, worth $14,806.
804. $60,000.
805. $104.
806. 36,120,000.
807. $1036.40.
808. $124,124.
809. $9.75.
810. 12,500; 375,000; 4,562,500.
811. 3,510,000.
812. $2956.50.
813. 4232.
814. 108.
815. $2250.
816. 352.
817. 300.
818. 30.
819. 13,243.
820. 2585.
821. 569.
822. In 1892.
823. $168,534,068.
824. $310.
825. 99 cents.
826. Gained $28.
827. $1711.
828. 67,266.
829. 15,625.
830. 2252 and 1543.
831. 150 years.
832. 420; 70.
833. 300,003,300,003
834. $118,324.
835. $53,328.
836. 24,225.
837. $5.
838. $196.
839. 2016.
840. $20.
841. $35.
842. 46.
843. 106.
844. 24.
845. 32; 5010 sq. mi
846. 121,470 sq. mi.
847. 475 sq. mi.
848. 1,411,344.
849. 446.
850. 1500.
851. $157.
852. $37,252.
853. 893; 8.

854. 452 and 372.
855. 37.
856. $20.
857. 25.
858. $64,676,808.
859. Total, 4,062,078; average, 406,208.
860. Estimated revenue, $6,309,294 too great; estimated expenditure, $17,226,935 too small; surplus, $63,463,771.
861. $116.
862. 296; 384; 140.
863. 27.
864. $4; $515.
865. $68; $58; $10.
866. 20,800.
867. 21 minutes past 6 o'clock.

CHAPTER II.

9. 177.95.
10. 9431.0363.
11. 175.02013.
12. 88.0079.
13. 5693.27953.
14. 415.1912.
15. 73.99196.
16. 1518.4624519.
17. 604.62264.
18. 826.523441.
19. 8002.1451.
20. 352.507856.
21. 2214.866922.
22. 25.6797.
23. 8.45816.
24. 15.55555554.
25. $250.07.
26. $226,512.68.
27. $33.52.
28. $696.95.
29. $12.25.
30. $1091.27.
31. $45.67.
32. 169.19 miles.
33. $25.33.
34. 124.67.
35. 8.6689.
36. 14.23836.
37. 0.1263.
38. 0.35.
39. 0.077.
40. 1.375.
41. 1.1875.
42. 3.0375.
43. 1.075.
44. 0.048.
45. 2.0075.
46. 1.0991.
47. 9.99999.
48. 111.985.
49. $115.19.
50. 0.0374.
51. 6.635
52. 7462.00109.
53. $383.13.
54. $8160.
55. 1.17468.
56. 0.3695855.
57. 8.91168.
58. 14.5619.
59. 0.1894334.
60. 0.019321.
61. 14.07978.
62. 18.30036.
63. 0.87948.
64. 1.395156.
65. 3.8243103.
66. 8.12997.
67. $27.75.
68. 145.08 miles.
69. 540.49 miles.
70. $2.52.
71. 15.9 degrees.
72. 0.945 inches.
73. $3.10.
74. 0.978 pounds.
75. 23.693 tons.
76. $132,879,444.41.
77. 29.58 inches.
78. 8.991; 8999.991
79. 25.4541.
80. 9.5484.
81. 1.4364.
82. 8.2586.
83. 1.19706.
84. 1.52066.
85. 0.0254541.
86. 0.0014364.
87. 2,545,410.
88. 954,840.
89. 0.49781

90. 44.73496.
91. 0.095484.
92. 0.119706.
93. 0.059214.
94. 7.27628.
95. 74.62746.
96. 175.252.
97. 0.0133416.
98. 0.0000000036.
99. 0.0000056743.
100. 0.00000518460.
101. 0.000039798.
102. $2791.23.
103. $162.56.
104. 54458.78097.
105. 0.001057632.
106. 0.2180515.
107. 8.6905632.
108. 0.99218266.
109. 0.441726$\dot{6}$42.
110. 583543.21.
111. 0.00008847.
112. 8902.764.
113. 45.60786.
114. 284.91564.
115. 50167.3392.
116. 0.23.
117. 74.6.
118. 12.3.
119. 0.229.
120. 7.5.
121. 85376.19.
122. 0.04.
123. 576.576.
124. 2.306.
125. 0.00368.
126. 360.
127. 0.893.
128. 72.922.
129. 1.003.
130. 2.324.
131. 15.217.
132. 0.062.
133. 20,000.
134. 961.
135. 7719.99982.
136. 0.3969.
137. 20015.09.
138. $1.153.
139. 72.5.
140. 72,500.
141. 0.000123.
142. 0.0000746.
143. 0.0000229.
144. 0.0509.
145. 2400.
146. 3.1416.
147. 0.007.
148. 0.0023.
149. 0.359.
150. 241.63.
151. 669.7342.
152. 324.675.
153. 0.9092.
154. $545.06.
155. 1384.26; 193.76.
156. 15.67.
157. $448.22.
158. $12.02.
159. 34.67.
160. $13.50.
161. 24.37.
162. $1487.22.
163. $143.575; $823.40.
164. $3789.11.
165. 6543.0109.
166. $6.375.
167. 365.
168. $149.80.
169. $2.95.
170. 17 cts.; $1.50.
171. 225.
172. 23 cts. a yard; $1.05 a shirt.
173. $1.557.
174. $67.50 total exp.; $1.12½ cost of a shirt.
175. $0.56.
176. 6 cts. cost of peach-stones; $0.075 price of single pear-tree; $18.41 amount of sales.
177. 2.5 cords; $10.80.
178. 1500.
179. $76.50.
180. $105.375.
181. $146.50.
182. 1500 pounds saltpetre; 250 lbs. sulphur; 250 lbs. charcoal.
183. 21.347.
184. 33.75 ft.
185. Length, 72 yds.; price, $115.20.
186. 20.88.
187. $2.46.
188. 125 doz.; 25 cts. a doz.
189. $1.89.
190. 3150 qts.; $84; butter, $5.25.

191. 67.14 lbs. flour; 87.24 lbs. bread.

192. $257.

193. 15 months.

194. $7.75.

195. 12 inches.

196.

		Number of pounds one dollar would buy in			
No.	*Article.*	*1860.*	*1872.*	*1878.*	*1883.*
1.	Flour, superfine,	25.64	18.18	22.72	24.39
2.	Corn meal,	45.45	55.55	47.62	37.04
3.	Rice,	13.33	8.93	10.87	11.76
4.	Tea, Oolong,	1.83	1.45	1.66	1.86
5.	Sugar, granulated,	9.70	8.33	10.00	10.53
6.	Beef, for roasting,	9.18	5.26	6.94	5.92
7.	Pork, salt,	9.09	9.09	10.31	8.47
8.	Butter,	4.58	2.55	3.97	3.31

197. 303 miles.
198. $440,000.
199. $16.50; 22 cts.
200. 5 children; $76,000.
201. Surplus, $2.60.
202. Surplus, $45.99.
203. Surplus, $78.03.
204. Surplus, $2.40.
205. Surplus, $90.10.
206. Surplus, $13.79.
207. Surplus, $15.01.
208. Deficit, $14.54.
209. $1,740,216.50.
210. $14,412,369.25.
211. 30.303 years.
212. 400.
213. B pays A $138.80.
214. $10.29.
215. $40.
216. 31.
217. 8, 15, and 18.
218. 35.
219. $78,672.16.
220. $151,716.04.
221. 9,759,746.74.
222. $55,850,688.84

CHAPTER III.

1. 17.
2. 34.
3. $4\frac{1}{2}$.
4. 345.
5. 106.
6. 233.
7. 14.
8. 106.
9. 2.
10. 725.
11. 4.
12. $\frac{3}{5}$.
13. $2\frac{1}{10}$.
14. 75.
15. 45.
16. 180.
17. $4\frac{2}{3}$.
18. 18.
19. $\frac{3}{10}$.
20. 128.
21. 4.
22. $5\frac{1}{8}$.
23. $11\frac{9}{14}$.
24. 17.
25. $46\frac{12}{19}$.
26. $3\frac{7}{81}$.
27. $3\frac{16}{113}$.
28. $46\frac{22}{43}$.
29. 139.
30. $91\frac{23}{47}$.
31. $85\frac{18}{35}$.
32. $37\frac{1}{27}$.
33. $30\frac{70}{81}$.
34. $27\frac{29}{73}$.
35. $45\frac{15}{188}$.
36. $63\frac{48}{71}$.
37. $21\frac{100}{195}$.
38. $39\frac{53}{195}$.
39. $5\frac{5}{72}$.
40. $51\frac{143}{171}$.

41. $\frac{92}{7}$.
42. $\frac{311}{11}$.
43. $\frac{95}{9}$.
44. $\frac{1192}{211}$.
45. $\frac{125}{14}$.
46. $\frac{271}{17}$.
47. $\frac{4617}{50}$.
48. $\frac{5558}{70}$.
49. $\frac{839}{36}$.
50. $\frac{4948}{15}$.
51. $\frac{16649}{18}$.
52. $\frac{8009}{89}$.
53. $\frac{355}{118}$.
54. $\frac{7725}{381}$.
55. $\frac{1038}{18}$.
56. $\frac{6824}{509}$.
57. $\frac{2952}{887}$.
58. $\frac{6971}{88}$.
59. $\frac{28567}{188}$.
60. $\frac{4881}{809}$.
61. $\frac{96}{12}, \frac{144}{12}, \frac{156}{12}, \frac{228}{12}, \frac{240}{12}$.
62. $\frac{75}{15}, \frac{165}{15}, \frac{210}{15}, \frac{255}{15}, \frac{360}{15}$.
63. $\frac{96}{16}, \frac{128}{16}, \frac{224}{16}, \frac{208}{16}, \frac{400}{16}$.
64. $\frac{12}{24}, \frac{16}{24}, \frac{18}{24}, \frac{20}{24}, \frac{21}{24}$.
65. $\frac{36}{60}, \frac{18}{60}, \frac{16}{60}, \frac{21}{60}, \frac{30}{60}$.
66. $\frac{24}{36}, \frac{20}{36}, \frac{15}{36}, \frac{30}{36}, \frac{14}{36}$.
67. $\frac{66}{18}, \frac{98}{18}, \frac{69}{18}, \frac{81}{18}, \frac{109}{18}$.
68. $\frac{300}{80}, \frac{144}{80}, \frac{99}{80}, \frac{128}{80}, \frac{187}{80}$.
69. $\frac{190}{40}, \frac{145}{40}, \frac{192}{40}, \frac{122}{40}, \frac{308}{40}$.
70. $\frac{36}{4}, \frac{72}{8}, \frac{63}{7}$.
71. $\frac{99}{3}, \frac{165}{5}, \frac{264}{8}$.
72. $\frac{319}{11}, \frac{377}{18}, \frac{580}{20}$.
73. $\frac{444}{12}, \frac{518}{14}, \frac{555}{15}$.

74. $\frac{2}{3}$.
75. $\frac{8}{9}$.
76. $\frac{24}{25}$.
77. $\frac{7}{9}$.
78. $\frac{2}{3}$.
79. $\frac{2}{3}$.
80. $\frac{2}{5}$.
81. $\frac{2}{3}$.
82. $\frac{52}{171}$.
83. $\frac{41}{56}$.
84. $\frac{7}{8}$.
85. $\frac{7}{16}$.
86. $\frac{9}{17}$.
87. $\frac{3}{5}$.
88. $\frac{2}{3}$.
89. $\frac{1}{3}$.
90. $\frac{13}{42}$.
91. $\frac{12}{18}$.
92. $\frac{97}{148}$.
93. $\frac{10}{11}$.
94. $\frac{49}{58}$.
95. $\frac{11}{18}$.
96. $\frac{9}{14}$.
97. $\frac{1}{7}$.
98. $\frac{287}{540}$.
99. $\frac{4}{5}$.
100. $\frac{128}{307}$.
101. $\frac{2}{3}$.
102. $\frac{14}{15}$.
103. $\frac{17}{18}$.
104. $\frac{18}{19}$.
105. $\frac{17}{19}$.
106. $\frac{7}{9}$.
107. $\frac{13}{25}$.
108. $\frac{4}{7}$.
109. $\frac{7}{9}$.
110. $\frac{3}{9}$.
111. $\frac{11}{14}$.
112. $\frac{7}{8}$.
113. $\frac{5}{6}$.
114. $\frac{4}{15}$.
115. $\frac{9}{82}$.
116. $\frac{68}{841}$.
117. $\frac{41}{100}$.
118. $\frac{112}{229}$.
119. $\frac{4}{15}$.
120. $\frac{57}{71}$.
121. $\frac{11}{17}$.
122. $\frac{69}{82}$.
123. $\frac{97}{101}$.
124. $\frac{47}{59}$.
125. $\frac{11}{19}$.
126. $\frac{2}{3}$.
127. $\frac{189}{544}$.
128. $\frac{26}{29}$.
129. $\frac{13}{28}$.
130. $\frac{37}{66}$.
131. $\frac{37}{41}$.
132. $\frac{10}{11}$.
133. $\frac{87}{110}$.
134. $\frac{7}{90}$.
135. $\frac{17}{59}$.
136. $\frac{3}{11}$.
137. $\frac{71}{234}$.
138. $\frac{1}{6}$.
139. $\frac{16}{75}$.
140. $\frac{4}{27}$.
141. $\frac{55}{216}$.

142. $4\frac{23}{24}$.
143. $\frac{77}{108}$.
144. $4\frac{5}{7}$.
145. $2\frac{4}{9}$.
146. $\frac{91}{842}$.
147. $\frac{1}{76}$.
148. $\frac{20}{27}$.
149. $91\frac{2}{3}$.
150. 2.
151. $\frac{1}{243}$.
152. $9\frac{1}{2}$.
153. $5\frac{10}{13}$.
154. $\frac{5}{8}$.
155. $\frac{3}{11}$.
156. $\frac{5}{22}$.
157. $\frac{2}{9}$.
158. $\frac{22}{27}$.
159. $\frac{4}{11}$.
160. $\frac{3}{16}$.
161. $\frac{8}{9}$.
162. $4\frac{5}{16}$.
163. $6\frac{2}{15}$.
164. $6\frac{45}{49}$.
165. $4\frac{2}{25}$.
166. $\frac{14}{15}$.
167. $1\frac{47}{77}$.
168. $4\frac{3}{28}$.
169. $1\frac{73}{77}$.
170. $73\frac{4}{7}$.
171. $6\frac{54}{91}$.
172. $323\frac{1}{5}$.
173. 76.
174. $17\frac{3}{8}$.
175. $\frac{540}{1813}$.
176. $69\frac{219}{319}$.
177. $65\frac{25}{48}$.
178. 1.
179. $\frac{49}{64}$.
180. $\frac{225}{232}$.
181. 1.
182. 1.
183. $1\frac{1}{2}$.
184. $12\frac{4}{9}$.
185. $3\frac{6}{7}$.
186. $1\frac{31}{77}$.
187. $1\frac{1}{10}$.
188. $\frac{9}{10}$.
189. $1\frac{1}{3}$.
190. $\frac{2}{3}$.
191. $1\frac{3}{11}$.
192. $1\frac{13}{15}$.
193. $1\frac{1}{38}$.
194. $\frac{32}{23}$.
195. $4\frac{1}{2}$.
196. $1\frac{3}{5}$.
197. $\frac{13}{14}$.
198. $1\frac{7}{18}$.
199. $3\frac{1}{7}$.
200. $9\frac{9}{22}$.
201. $9\frac{1}{2}$.
202. $4\frac{3}{7}$.
203. 7.
204. 20.
205. $17\frac{8}{11}$.
206. $\frac{8}{9}$.
207. $\frac{4}{9}$.
208. $\frac{7}{19}$.
209. $\frac{5}{12}$.
210. 3.
211. $3\frac{11}{17}$.
212. $\frac{1}{8}$.
213. $\frac{4}{81}$.
214. $\frac{6}{55}$.
215. $\frac{7}{44}$.
216. $\frac{7}{9}$.
217. $\frac{13}{15}$.
218. $\frac{33}{56}$.
219. $\frac{2967}{2968}$.
220. $\frac{1679}{1680}$.
221. $1\frac{101}{1120}$.
222. $\frac{6}{12}, \frac{8}{12}, \frac{9}{12}$.
223. $\frac{8}{12}, \frac{9}{12}, \frac{10}{12}$.
224. $\frac{8}{12}, \frac{9}{12}, \frac{10}{12}, \frac{7}{12}$.
225. $\frac{12}{36}, \frac{9}{36}, \frac{30}{36}, \frac{32}{36}$.
226. $\frac{144}{180}, \frac{160}{180}, \frac{165}{180}, \frac{156}{180}$.
227. $\frac{300}{360}, \frac{100}{360}, \frac{195}{360}, \frac{228}{360}$.
228. $\frac{84}{96}, \frac{68}{96}, \frac{57}{96}, \frac{22}{96}$.
229. $\frac{32}{48}, \frac{40}{48}, \frac{28}{48}, \frac{45}{48}$.
230. $\frac{36}{126}, \frac{27}{126}, \frac{35}{126}, \frac{98}{126}, \frac{12}{126}$.
231. $\frac{96}{256}, \frac{192}{256}, \frac{48}{256}, \frac{12}{256}, \frac{3}{256}$.
232. $\frac{216}{360}, \frac{168}{360}, \frac{80}{360}, \frac{165}{360}, \frac{315}{360}, \frac{136}{360}$.
233. $\frac{504}{756}, \frac{567}{756}, \frac{540}{756}, \frac{441}{756}, \frac{546}{756}, \frac{112}{756}$.
234. $\frac{2}{18}, \frac{1}{7}, \frac{1}{8}$.
235. $\frac{24}{25}, \frac{5}{6}, \frac{4}{5}$.
236. $\frac{11}{15}, \frac{7}{10}, \frac{3}{8}$.
237. $\frac{1}{7}, \frac{3}{22}, \frac{2}{15}$.
238. $\frac{13}{66}, \frac{2}{11}, \frac{5}{33}$.
239. $\frac{5}{6}, \frac{13}{16}, \frac{7}{9}$.

240. $\frac{9}{10}$, $\frac{8}{9}$, $\frac{5}{6}$.

241. $\frac{1}{18}$, $\frac{3}{40}$, $\frac{2}{27}$.

242. $\frac{44}{45}$, $\frac{17}{18}$, $\frac{8}{9}$.

243. $\frac{14}{15}$, $\frac{11}{12}$, $\frac{9}{10}$.

244. $\frac{11}{15}$, $\frac{2}{3}$, $\frac{7}{12}$.

245. $\frac{9}{19}$, $\frac{4}{9}$, $\frac{3}{7}$.

246. $1\frac{1}{12}$.

247. $2\frac{19}{72}$.

248. $2\frac{21}{40}$.

249. $2\frac{52}{495}$.

250. $1\frac{17}{21}$.

251. $1\frac{7}{24}$.

252. $2\frac{1}{24}$.

253. $1\frac{37}{63}$.

254. $1\frac{19}{294}$.

255. $1\frac{139}{144}$.

256. $2\frac{1}{144}$.

257. $1\frac{688}{2205}$.

258. $2\frac{497}{540}$.

259. $2\frac{554}{819}$.

260. $3\frac{71}{468}$.

261. $2\frac{43}{180}$.

262. $7\frac{1}{36}$.

263. $12\frac{57}{70}$.

264. $24\frac{29}{42}$.

265. 10.

266. $8\frac{59}{90}$.

267. $32\frac{3}{4}$.

268. $28\frac{23}{24}$.

269. $30\frac{7}{16}$.

270. $28\frac{47}{48}$.

271. $37\frac{19}{28}$.

272. $17\frac{1}{5}$.

273. $9\frac{1}{7}$.

274. $8\frac{7}{11}$.

275. $10\frac{4}{13}$.

276. $7\frac{23}{25}$.

277. $22\frac{6}{29}$.

278. $17\frac{6}{19}$.

279. $5\frac{4}{21}$.

280. $4\frac{20}{81}$.

281. $18\frac{6}{37}$.

282. $\frac{1}{6}$.

283. $\frac{1}{20}$.

284. $\frac{7}{36}$.

285. $\frac{13}{60}$.

286. $\frac{2}{77}$.

287. $\frac{1}{132}$.

288. $\frac{17}{56}$.

289. $\frac{46}{255}$.

290. $\frac{4}{45}$.

291. $\frac{9}{304}$.

292. $\frac{33}{64}$.

293. $\frac{17}{150}$.

294. $\frac{1}{42}$.

295. $\frac{5}{42}$.

296. $\frac{71}{100}$.

297. 0.

298. $\frac{5}{24}$.

299. $\frac{25}{63}$.

300. $\frac{17}{84}$.

301. $\frac{32}{105}$.

302. $1\frac{1}{4}$.

303. $2\frac{2}{15}$.

304. $2\frac{23}{28}$

305. $4\frac{1}{2}$.

306. $8\frac{7}{20}$.

307. $7\frac{1}{12}$.

308. $4\frac{9}{16}$.

309. $2\frac{17}{45}$.

310. $1\frac{23}{63}$.

311. $20\frac{1}{48}$.

312. $3\frac{5}{8}$.

313. $2\frac{7}{8}$.

314. $2\frac{34}{45}$.

315. $\frac{1}{3}$.

316. $\frac{5}{6}$.

317. $2\frac{53}{72}$.

318. $20\frac{11}{20}$.

319. $6\frac{7}{8}$.

320. $5\frac{23}{32}$.

321. $\frac{23}{45}$.

322. 1152.

323. $\frac{2}{11}$.

324. $\frac{1}{707}$.

325. $\frac{14}{99}$.

326. $2\frac{142}{825}$.

327. $\frac{4}{5}$.

328. $\frac{1}{8}$.

329. $\frac{5}{16}$.

330. $\frac{5}{32}$.

331. $\frac{4}{125}$.

332. $\frac{1}{250}$.

333. $\frac{1}{16}$.

334. $\frac{448}{625}$.

335. $\frac{17}{400}$.

336. $\frac{15}{32}$.

337. $\frac{8}{3125}$.

338. $\frac{3}{8000}$.

339. 0.7.

340. 0.09.

341. 0.017.

342. 0.213.

343. 0.083.

344. 0.0017.

345. 0.0217.

346. 0.3219.

347. 0.375.

348. 0.875.

349. 0.16.

350. 0.52.

351. 0.4375.

352. 0.3125.

353. 0.34375.

354. 0.075.

355. 0.140625.

356. 0.0875.

357. 0.024.

358. 0.0546875.

359. 0.19375.

360. 0.044.

361. 0.026.

362. 0.0265625.

363. 0.00875.

364. 0.006875.

365. 0.096875.

366. 0.2928.

367. 0.41125.

368. 0.91015625.

369. 0.001953125.

370. 0.998046875.

371. $0.\dot{6}$.

372. $0.\dot{7}$.

373. $0.\dot{3}\dot{6}$.

374. $0.\dot{0}2\dot{7}$.

375. $0.\dot{0}4$.

376. $0.\dot{1}4\dot{8}$.

377. $0.\dot{3}8461\dot{5}$.

378. $0.\dot{5}2380\dot{9}$.

379. $0.\dot{0}5691\dot{1}$.

380. $0.\dot{0}04\dot{4}$.

381. $0.\dot{0}110\dot{7}$.

382. $0.8\dot{3}$.

383. $0.291\dot{6}$.

384. $0.1\dot{3}\dot{6}$.

385. $0.\dot{0}0044\dot{4}$.

386. $0.28\dot{4}$.

387. $0.1\dot{4}8\dot{6}$.

388. $0.046\dot{2}\dot{9}$.

389. $0.050\dot{6}7\dot{5}$.

390. $0.\dot{0}243\dot{9}$.

391. $\frac{1}{6}$.

392. $\frac{7}{60}$.

393. $\frac{5}{12}$.

394. $\frac{32}{111}$.

395. $\frac{1}{12}$.

396. $\frac{7}{308}$.

397. $\frac{31}{44}$.

398. $\frac{1}{220}$.

399. $\frac{1}{185}$.

400. $\frac{1}{44}$.

401. $\frac{3}{550}$.

402. $\frac{11}{120}$.

403. $\frac{1}{41}$.

404. $\frac{3}{7}$.

405. $\frac{1}{18}$.

406. $\frac{1}{40}$.

407. $8\frac{5}{8}$; $29\frac{5}{14}$.

408. Each $= \frac{1}{8}$.

409. $25\frac{7}{11}$; $344\frac{2}{3}$.

410. $59\frac{5}{17}$.

411. \$23.67.

412. $\frac{6}{16}$, $\frac{51}{136}$, $\frac{33}{88}$, $\frac{39}{104}$, $\frac{48}{128}$.

413. $29\frac{1}{6}$; 168.

414. \$86,400.

415. 150.

416. \$345, \$230.

417. $\$2.37\frac{1}{2}$.

418. $\frac{10}{57}$.

419. \$44.55.

420. $26\frac{4}{15}$.

421. 48.

422. \$9.56.

423. \$237.75.

424. $\frac{1}{25}$.

425. 15.

426. \$2.58.

427. 0.31895.

428. 14.

429. \$2.79.

430. 162.

431. \$685.97.

432. \$18.25.

433. Loss, \$8.25.

434. 24.

435. 6; $2\frac{2}{5}$; $5\frac{1}{4}$; $3\frac{6}{7}$.

436. \$720.

437. $\frac{1}{16}$.

438. $8\frac{3}{8}$, $13\frac{3}{8}$.

439. $1\frac{14}{45}$.

440. $\frac{3}{16}$. **446.** $38.25. **452.** 300,000.

441. 1. **447.** $\frac{1}{8}$. **453.** 1.259525.

442. 880. **448.** $18.55. **454.** $\frac{7}{135}$.

443. $\frac{25}{82}$. **449.** $23\frac{23}{42}$. **455.** 15.

444. $19.77. **450.** $\frac{2}{11}$. **456.** 750.

445. 4 cows; $2.35. **451.** The first, $\frac{1}{418}$. **457.** 37.

458.

Corn,	119,940,000 bu.	Barley,	1,420,989 bu.
Wheat,	49,790,475 "	Potatoes,	10,574,000 "
Rye,	435,120 "	Tobacco,	38,434,587 lbs.
Oats,	25,519,200 "	Hay,	2,210,400 tons.

459. 84. **462.** $\frac{3}{1210}$. **465.** $236.43.

460. $20.14. **463.** 9. **466.** $100.

461. 210; $1470. **464.** 51 of each.

467. Nitre, 22 lbs.; charcoal, $4\frac{2}{3}$ lbs.; sulphur, $3\frac{1}{3}$ lbs.

468. $1.44. **473.** $187.50. **478.** $\frac{14}{165}$.

469. 2520; 23. **474.** $2\frac{2}{35}$. **479.** 54.

470. 3960; 29. **475.** $241\frac{5}{6}$. **480.** $3.06.

471. $9\frac{13}{126}$. **476.** $4200. **481.** 22.29187.

472. $\frac{7}{80}$. **477.** 240.

482. Dictionary, $2.40; geography, $1.92; skates, $1.60.

483. 125\frac{1}{4}$. **485.** 10. **487.** $7\frac{3}{7}$.

484. $91.52. **486.** $3\frac{3}{28}$. **488.** $142,093\frac{53}{64}$.

489. 36. **490.** $94.20; $0.60.

491. First man, $7; second man, $6; and boy, $1.

492. 420. **493.** Loss, $13.80. **494.** $18.23.

495. 1,239,927; 177,133; $18,598.90.

496. 210. **498.** $1075.20. **500.** $6\frac{2}{3}$ cents.

497. $4.61. **499.** $2100. **501.** $17\frac{1}{7}$.

502. $0.90. **503.** $9\frac{13}{16}$. **504.** Father, $21\frac{3}{7}$; son, 50.

505. 157; 41,448.

506. $178\frac{5}{7}$.

507. 0.307692; $0.\dot{2}\dot{7}$; $3.2\dot{1}4285\dot{7}$.

508. 12.12248; $7.87\dot{8}4175\dot{1}$.

509. 27.2408771.

510. $1\frac{1}{9}$ lbs.; $\frac{10}{19}$ lbs.

511. Tin, $\frac{19}{200}$ lbs.; copper, $\frac{181}{200}$ lbs.

512. $22\frac{1}{6}\frac{1}{8}$.

513. 1.

514. (i.) $\$2\frac{1}{2}$; (ii.) $\$0.078$; (iii.) $172\frac{29}{48}$ cu. ft.

515. $\frac{1}{21}$.

516. $36, $32, $28.

517. Silver, $72\frac{29}{50}$; copper, $118\frac{21}{50}$.

518. First, 63 acres, $2583; second, $52\frac{1}{2}$ " $2152\frac{1}{2}$.

519. $2942.80.

520. 30.

521. 29.

522. 56.

523. $897.07.

524. 3.

525. 1520.

526. Half a loaf.

527. 100.

528. 300 and 180.

529. 32.

530. $247,444.06.

531. $1\frac{331}{1671}$; $1.03, $1.14, $0.83.

532. $13\frac{1}{3}$; $8\frac{2}{3}$.

533. $4\frac{1}{2}$ mi. per hr.

534. $0.24\frac{2}{7}$.

535. Gain, $27.75.

536. 3 cents.

537. 352.

538. Corn, 33 bu.; potatoes, 144 bu.; oats, 42 bu.

539. $10\frac{8009}{9564}$.

CHAPTER IV.

1. 320 ft.
2. 320 chains.
3. 547,740 ft.
4. 261,360 sq. ft.
5. 102,400 cu. ft.
6. 1008 pts.
7. 604,800 sec.
8. 8784 hrs.
9. 108,000″.
10. 6480 *d.*
11. 24 yds.
12. 6 mi.
13. 16 mi.
14. 30 bu.
15. 20 gals.
16. 7500 gals.
17. 8 t.
18. 12 hrs.
19. 4 yrs.
20. £44.
21. 19,644 ft.
22. 4779 sq. rds.
23. 2,006,208 cu. in.
24. 1540 pts.
25. 164 gi.
26. 57,528 gr.
27. 554,240 oz.
28. 15 mi. 250 rds. 2 yds. 2 ft. 4 in
29. 22 sq. mi.

30. 6 A.
31. 140 cu. yds.
32. 60 cds.
33. 3 Troy lbs.
34. 1 t. 1460 lbs.
35. 13 wks. 5 dys. 17 hrs. 32 min.
36. 45°.
37. 8125 cr. 1 *s.* $4\frac{3}{4}$ *d.*
38. $180.
39. $1\frac{1}{2}$ mi.
40. 11 A. 10 sq. yds.
41. 29 cu. yds.
42. 54 cds.
43. 92 gals.
44. 15 bu. 3 pks. 4 qts.
45. 11 lbs. 3 oz. 14 dwt.
46. 31 t. 500 lbs.
47. 17 lbs.
48. 10 dys. 23 hrs. 8 min. 11 sec.
49. 1,137,636 in.
50. 1,457,795 sq. ft.
51. 924,480 cu. in.
52. 137,229 gr.
53. 179,700 min.
54. $\frac{1}{5200}$ mi.
55. $\frac{1}{480}$ mi.
56. $\frac{8}{35880}$ A.
57. $\frac{1}{108}$ cu. yd.
58. $\frac{1}{224}$ gal.
59. $\frac{1}{256}$ bu.
60. $\frac{1}{56}$ of 2 lbs.
61. $\frac{1}{1630}$ wk.
62. $\frac{1}{172800}$ dy.
63. $\frac{25}{121}$ A.
64. 0.96 gi.
65. $\frac{1}{48}$ of 2 hrs.
66. 2112 paces.
67. $\frac{1}{112}$.
68. 5,353,920 in.
69. 8250 ft.
70. 266 rds. 11 ft.
71. 1089 sq. ft.
72. 32 A.
73. 5184 cu. in.
74. 259.2 cu. in.
75. 5 cu. ft. 576 cu. in.
76. 4 pts.
77. 24 qts.
78. 1 qt. $2\frac{2}{3}$ gi.
79. 285 lbs. 11 oz. $6\frac{6}{7}$ dr.
80. 1625 lbs.
81. 2 oz. 13 dwt. 8 gr.
82. 900 sec.
83. $211\frac{7}{10}$ dys.
84. $\frac{20}{231}$ rds.
85. $\frac{8}{121}$ sq. rd.
86. $\frac{1}{16}$ cd.
87. $\frac{1}{20}$.
88. $\frac{1}{6}$.
89. 0.01625 lbs.
90. $\frac{43}{112}$ lbs.
91. 3 min. $4\frac{4}{125}$ sec.
92. 186 boxes.
93. $102.40.
94. 45 mi. 319 rds. 5 in.
95. 19 A. $75\frac{81}{121}$ sq. rds.
96. 49 cu. yds. 17 cu. ft.
97. 43 wks. 3 dys. 22 hrs. 41 min. 29 sec.
98. 56 rds. 2 yds. 1 ft. $9\frac{3}{17}$ in.
99. 927.96 ft.
100. 108,900 sq. ft.
101. 1.728 cu. in.
102. 63 qts.
103. 6 oz.
104. 4 dys. 16 hrs. 30 min.
105. 17 hrs. 6 min. $43\frac{1}{5}$ sec.
106. 0.05.
107. $\frac{1}{24}$.
108. $\frac{1}{126}$.
109. $\frac{4}{33}$.
110. $\frac{5}{6}$.
111. $\frac{5}{18}$.
112. $\frac{1}{9}$.
113. $\frac{1}{96}$.
114. 0.140625.
115. $\frac{1}{4000}$.
116. $\frac{157}{320}$.
117. $\frac{55}{112}$.
118. 0.03862.....
119. 28,500.
120. 80 ch.; 7.92 in.
121. 1468.5 ft.
122. 48 ft.
123. $4\frac{403}{660}$ mi.
124. $553\frac{8}{11}$ mi.
125. 9 ft. 9 in.
126. 23,040 A.
127. 1344 liq. qts.
128. 9154 dry qts.
129. 3000 gals.
130. 320 bu.
131. 9.4 gals. nearly.
132. 34,056 U.S. bu.
133. $\frac{144}{175}$ lb. avoir.
134. 5250 lbs. Troy.
135. $\frac{25}{36}$ lb. Troy.

136. $933\frac{1}{3}$ dr. **138.** 320; 4752. **140.** 36 A. 62 sq. rds.
137. 12,000 cu. ft. **139.** 193 mi. 100 rds. $2\frac{1}{3}$ ft. **141.** 49 gals. 3 qts. 1 pt.
142. 42 ft. 2 in. **144.** 29 wks. 4 dys. 13 hrs. 16 min. 35 sec.
143. 59 bu. 2 pks. 7 qts. 1 pt. **145.** 219° 32′. **146.** 21 t. 660 lbs.
147. 21,553 gr. **149.** $46,237\frac{1}{2}$ sq. ft. **151.** 4 ft. 4 in.
148. 442 ft. **150.** 6 gals. **152.** 120 sq. rds.
153. $3\frac{1}{2}$ cds. **157.** 2 gals. 1 qt. 2 gi.
154. 1 bu. 3 pks. 2 qts. 1 pt. **158.** 80 lbs.
155. 4 cu. yds. 8 cu. ft. 576 cu. in. **159.** 15 mi. 168 rds. 1 yd.
156. 1 pk. 6 qts. **160.** 1 mi. 1531 yds. 1 ft. 3 in.
161. 10 mi. 263 rds. $13\frac{1}{2}$ ft.
162. 1 A. 47 sq. rds. 17 sq. yds. 5 sq. ft. 26 sq. in.
163. 3 A. 123 sq. rds. **165.** 1 lb. 9 oz. 18 dwt. **167.** $9\frac{1}{4}$ in.
164. 27 gals. 1 pt. **166.** 10,601,160 sec. **168.** $217\frac{1}{4}$ yds
169. 167 ft. 3 in. **182.** 2 t. 740 lbs. 8 oz.
170. 249 sq. rds. $99\frac{3}{4}$ sq. ft. **183** $9708.59.
171. 1610 A. 115 sq. rds. **184.** 7 A. 79 rds. 26 sq. yds.
172. 805 t. 811 lbs. 3 oz. **185.** 11 A. 96 sq. rds. $3\frac{1}{2}$ sq. yds.
173. 9399 mi. 48 rds. **186.** 35,418 lbs. 8 oz. 8 dwt. 19 gr.
174. 147 bu. 3 pks. 7 qts. 1 pt. **187.** $4\frac{6}{11}$ mi. per hr.
175. 322 gals. 3 qts. $2\frac{1}{2}$ gi. **188.** 168 rds. $3\frac{23}{35}$ yds.
176. 157 lbs. 4 oz. 13 dwt. 8 gr. **189.** 142 sq. rds.
177. 38 A. 40 sq. rds. **190.** 5 cds. $38\frac{1}{4}$ cu. ft.
178. 34 bu. 4 qts. **191.** 2 A. $124\frac{41}{71}$ sq. rds.
179. 22 gals. 2 qts. **192.** 10 oz. 13 dwt. 9 gr.
180. 92,232 gr. **193.** 46 lbs.
181. 272 dys. 12 hrs. 31 min. 40 sec. **194.** 7 wks. 4 dys. 13 hrs. 25 min.
195. 17 wks. 5 dys. 19 hrs. 25 min. 32 sec.
196. 608 bottles. **202.** 1 rd. $1\frac{1}{2}$ yds. **208.** 368 yrs.
197. 64 dys. **203.** 17 books. **209.** 265 yrs.
198. 60 bbls. **204.** 35 sq. rds. **210.** 70 yrs.
199. 100 bags. **205.** 54 spoons. **211.** 3885 yrs.
200. 7128 panes. **206.** 78 boxes. **212.** 2639 yrs.
201. 9 times. **207.** 393 yds. **213.** 2365 yrs.
214. 1929 yrs. **219.** 84 yrs. 3 mos.
215. 62 yrs. 3 mos. 8 dys. **220.** 52 yrs
216. 82 yrs. 6 mos. 24 dys. **221.** 70 yrs. 9 mos. 6 dys.
217. 84 yrs. 2 mos. 25 dys. **222.** 75 yrs. 0 mos. 27 dys.
218. 67 yrs. 9 mos. 22 dys. **223.** Feb. 5, 1881.

224. May 5, 1821.
225. Sept. 21, 1832.
226. Feb. 19, 1473.
227. Feb. 19, 1564.
228. Jan. 22, 1788.
229. 185 dys.
230. 72 dys.
231. 109 dys.
232. 108 dys.
233. 123 dys.
234. 698 dys.
235. Sept. 19.
236. July 7.
237. Wednesday.
239. Sunday; Tuesday; 1864.
240. Tuesday, Monday.
241. Tuesday.
242. Sept. 7.
243. Thursday.
244. 1048 hrs.
245. 6230 min.
246. 5 hrs. for E. standard time; 6 hrs. for C. standard time; 7 hrs. for M. standard time; 8 hrs. for W. standard time.
247. The time by the sun is 15 min. 44 sec. later at Boston; 3 min. 56 sec. later at New York; and 8 min. earlier at Washington.
248. The time by the sun is 21 min. 24 sec. later at Cincinnati; 9 min. 28 sec. later at Chicago; and 1 min. earlier at St. Louis.
249. 1° 57′.
250. 12° 51′ 15″.
251. 19° 33′.
252. 153° 19′ 45″.
253. 20° W.
254. 39° 15′ E.
255. 11° 43′ W.
256. 47° 23′ E.
257. 23 min. 44 sec.
258. 54 min. 28 sec.
259. 4 hrs. 43 min. 56 sec.
260. 6 hrs. 50 min. 48 sec.
261. 2394 half-crowns.
262. 79 *l.* 13 *s.* 1 *d.*
263. 7 *s.* 9 *d.*
264. 29 *l.* 5 *s.* $1\frac{1}{2}$ *d.*
265. 4 *l.* 11 *s.*
266. 5 *l.* 18 *s.* $1\frac{1}{2}$ *d.*
267. 17 *l.* 17 *s.* 6 *d.*
268. 114 *l.* 6 *s.* $10\frac{1}{2}$ *d.*
269. 1 *l.* 6 *s.* 8 *d.*
270. $739.
271. 4109 *l.* 18 *s.*
272. $752.70.
273. 1634 marks.
274. $31\frac{13}{77}$ min.
275. $4\frac{5}{9}$ mi. per hr.
276. 66 ft. per sec.
277. 4 hrs.
278. 8 hrs. $22\frac{6}{7}$ min.
279. $32\frac{8}{11}$ mi. per hr.
280. 3 mi. 202 rds. $1\frac{14}{15}$ ft.
281. $7\frac{3}{4}$ mi. per hr.
282. $4\frac{6}{11}$ mi. per hr.
283. 8 mi. 1400 yds. per hr.
284. $1118\frac{3}{17}$ ft. per sec.
285. 319 dys. $9\frac{13}{31}$ hrs.
286. 12,800 quires.
287. 38,400 sheets.
288. 40 reams.
289. 80 bottles.
290. 1120 t.
291. 131,040; 129,600.
292. $1767.
293. 203 boxes.
294. 128 bottles.
295. 106 dys. 11 hrs.
296. 24 dys. 7 hr. $29\frac{6}{7}$ m.
297. $594,000.
298. 213 boxes.
299. 960 bottles.
300. 136 gals. 3 qts. 1 pt.
301. 365.24224.....
302. 29 dys. 12 hrs. 44 min. 3 sec.
303. 35 bu. $3\frac{4}{9}$ pks.
304. $\frac{8}{21}$ gill.
305. $6.75.
306. $552.
307. 15 A. 107 sq. rds 6 sq. yds.
308. 456 yds.
309. 13 dys. 2 hrs. 45 min.
310. 30 bu. 3 pks. 3 qts.
311. 12,000 lbs.
312. 1250 reams.
313. 23,232 steps.
314. 504,000 times.

315. 2139 gals.
316. $16\frac{4}{11}$ mi.
317. $536.
318. $3827.60.
319. $2768.
320. $90.
321. $15.45.
322. 5 ft. 6 in.
323. 23.
324. 672 parcels.
325. 5 lbs. 7 oz. 18 dwt. 9 gr.
326. 726 trees.
327. 2,901,600.
328. 553 bu.
329. $163.80.
330. $85.80.
331. 76 dys.
332. $165.06.
333. $45\frac{9}{35}$ lbs.
334. $4\frac{1}{3}$ gr.
335. 10 doz. of each.
336. $3\frac{3}{4}$ mi. per hour.
337. $27.10.
338. $23\frac{1}{2}$ hrs.
339. $2.
340. 4 A. 12 sq. rds. 30 sq. yds. $\frac{7}{9}$ sq. ft.
341. $14.98.
342. 43.
343. 18 sq. rds.
344. 2 A. 23 sq. rds.
345. 19 hrs. 10 min.
346. 9 dys. 5 hrs. 20 min.
347. 1340 mi. 237 rds. $3\frac{1}{2}$ yds
348. $310.40.
349. $504.
350. $30.80; $34.20; $65.
351. $27,109.10.
352. $33.72.
353. 8 hrs. 11 min. 43 sec.
354. 18 cds.
355. $82\frac{1}{10}$ A.
356. 23 mi. 1481 yds.
357. $33\frac{3}{8}$ in.
358. $4.63.
359. 21 yds. 2 ft. $2\frac{5}{8}$ in.
360. $116\frac{1}{3}$ yds.
361. $\frac{3}{4}$ of a yard.
362. 42 bags.
363. $16.80.
364. $1.57.
365. $11\frac{3}{7}$ lbs. sugar.
$22\frac{1}{2}$ lbs. jelly.
366. $2031\frac{1}{2}$ lbs.
367. 14 lbs.
368. $1.65.
369. 3.
370. $24.70.
371. 27 min.
372. $67\frac{1}{2}$ bu.
373. $388\frac{8}{9}$ lbs.
374. $490.28.
375. $173,913.04; $36,363.63.
376. 8400 ems.
377. $49.77.
378. 8 sq. yds. 7 sq. ft. $108\frac{11}{12}$ sq. in.
379. 0.302 dys.
380. 8 hrs. 51 min. 56 sec. A.M.
381. 44 min. 24 sec. past 12 o'clock.
382. 1 hr. 54 min. 40 sec. A.M.
383. 10 hrs. 41 min. 44 sec. P.M. of the day before.
384. 168 yds.
385. 0.1534 yr.
386. 5 P.M.
387. 39 t. 12 cwt.
388. 250 dys. 13 hrs.
389. 1054 dys. 16 hrs.
390. $23\frac{4}{7}$ ft. per sec.
391. $1058.
392. 660 times.

393.

Animals.	Total Rations.				
	Oats. qts.	Meal. qts.	Hay. lbs.	Straw. lbs.	Roots. lbs.
Horses	2376		3168	2376	
Oxen		1296	2592	3240	9720
Cows		530	3710	2650	5300
Sheep.			5004	3336	16680
Total	74 bu. 1 pk.	57 bu. 2 qts.	7 t. 474 lbs.	5 t. 1602 lbs.	15 t. 1700 lbs.

394. $1033\frac{1}{2}$ mi.

395. Each man, $20.94; each woman, $10.47.

396. 96 bu.

397. 927; 3 mi. 24 yds. 1 ft. 6 in.

398. 1507.

399. On Wednesday, at 2 hrs. 32 min. $18\frac{6}{13}$ sec. A.M.

400. Alloy, $17\frac{7}{9}$ cwt.; lead, $1\frac{29}{36}$ cwt.; tin, $\frac{5}{12}$ cwt.

401. 3680.

402. $3\frac{1}{2}$ hrs.

403. $737\frac{7}{25}$ A.

404. $66.50.

405. $23.76.

406. 0.0069 dy.

407. 19.87\frac{1}{2}$ cts.

408. $3.24.

409. 8.

410. 19.2 sec.

411. 292; $\frac{4}{5}$.

412. 0.02.

413. 4 hrs. 6 min. 3 sec.

414. $68\frac{6}{29}$ times.

415. 3 mi. 1216 yds.

416. Europe, 303,827,400; Australia, 3,191,250.

417. 121 A.

418. 480.

419. A, 168 lbs.; B, 120 lbs.

420. The former, by 32 yds. per minute.

421. $98.

422. $11.31.

423. $4\frac{1}{2}$ qts.

424. 19 hrs. 22 min. $22\frac{2}{25}$ sec.

425. 155.54 t. copper; 46.46 t. tin.

426. $526\frac{2}{9}$ sq. yds.

427. $281\frac{1}{4}$ bu. nearly.

428. 1919 pts.; $479.75; 424 bottles.

429. 1320; $42.90.

430. 52 yds.

431. $2471.40.

432. $459.60.

433. $545.

434. 6 hrs. 9 min. 13 sec.

435. 43 cents each.

436. 80 gals.

437. 19 hrs. 32 min.; 1250 qts.

438. $928.64; $2179.20.

439. $\frac{13}{32}$; $\frac{13}{48}$; $\frac{1}{96}$.
440. 50 mi. per hour.
441. 48 mi. per hour.
442. B.; 11 sec.
443. $9.74.
444. $38\frac{2}{15}$ dys.; $572.
445. 0.2083 dy.
446. 75 lbs.
447. $57.
448. 0.003203965.
449. 231 gals.
450. 2 ft. $\frac{3}{4}$ in.; 132 lbs.
451. 6 men.
452. $1.80.
453. 29 dys. 12 hrs. 43 min. 12 sec.
454. $52\frac{1}{5}$ yds.
455. $2\frac{2}{3}$ dys.
456. $25.60.
457. 2 dys. 4 hrs. 44 min.; $12\frac{12}{19}$ sec.
458. $5.49.
459. $\frac{7}{15}$; $\frac{11}{24}$; $\frac{1}{120}$.
460. $73.50.
461. $770; 77 pieces.
462. $25.75.
463. 180.
464. 164 mi. $1407\frac{1}{2}$ yds.
465. 10.45 P.M.; 11.30 P.M.
466. $149\frac{11}{48}$ mi.
467. $22.70.
468. Shares are $8.16 and $5.76.
469. $\frac{35}{176}$.
470. 4 min. 16 sec.; 490 yds.
471. $6\frac{33}{215}$.
472. $26.49.
473. 90 cents per pair.
474. $2118.75; $2574.75.
475. $662,323.20.
476. $2.02.
477. $5490.60.
478. Jan. 20.
479. 13 min. 20 sec.
480. 29.433 in.
481. $2954\frac{1}{4}$ lbs.
482. $\frac{6}{35}$.
483. 1872, £1581 11 *s.* 2 *d.*
1882, £1645 5 *s.* 4 *d.*
484. $32\frac{23}{96}$.
485. $3.60; $3; $6.
486. 2 dys. 22 hrs. 22 min. 1 sec.
487. 2 hrs. 36 min.; 24 min.
488. $\frac{3}{7}$.
489. $\frac{1}{7}$.
490. 1.8°.
491. 750 yds.; 4 min.
492. 10 hrs. 23 min. 24 sec. A.M
493. $12\frac{8}{25}$ cu. ft.
494. 21 min.; $5\frac{11}{30}$ mi.
495. 400 gals.
496. $6\frac{3}{4}$ hrs.
497. 27.3215 dys.
498. $20.80.
499. Indian corn, 1,850,139 bu.
Buckwheat, 104,240 bu.
Rye, 430,500 bu.
Oats, 717,309 bu.
Potatoes, 5,244,120 bu.
Hay, 863,691 t.
500. 10 hrs. 45 min. 19 sec. P.M.
501. $\frac{1}{143}$.
502. $1056\frac{1}{6}$.
503. $7.89 per ton.
504. $\frac{1}{57}$.
505. 2414.016 meters.
506. 91,047,000 mi.
507. $4\frac{2}{19}$; $3\frac{21}{26}$; $3\frac{14}{15}$.
508. $4505.26.
509. $\frac{13}{67}$.

510. At intervals of 2 min.
511. $1081\frac{13}{24}$.
512. 8.664..... kil.
513. $\frac{1}{28}$ oz.; 1568.
514. 0.430625.
515. $4\frac{37}{122}$ dys.
516. 82; $3\frac{1}{18}$ qts.
517. $1\frac{5}{8}$.
518. $0.00044507\dot{5}$.
519. 19 gals.
520. A.; 15 min.
521. 4 hrs. $5\frac{8}{11}$ min.;
4 hrs. $38\frac{2}{11}$ min.;
4 hrs. $21\frac{9}{11}$ min.;
4 hrs. $54\frac{6}{11}$ min.
522. 52° 15′.
523. 9 dys. 3 hrs. 39 min. $53\frac{9}{11}$ sec.
524. 6 hrs. 5 min. $17\frac{1}{7}$ sec.
525. 1.1284 mi.
526. 549,600.
527. $39\frac{6}{121}$.
528. $\frac{124}{149}$.
529. $6\frac{105}{113}$.
530. 42, 21, 7.
531. 25 yds.
532. $1315\frac{15}{16}$ lbs.; 250 lbs.
533. $38\frac{2}{5}$ bunches.
534. $60.
535. $1.25.
536. $379\frac{1}{2}$ mi.
537. 10 hrs. 51 min. 4 sec. P.M., June 8th.
538. 25° 42′ 30″ W.

CHAPTER V.

1. 5%; 10%; 45%; $6\frac{1}{4}$%; 80%.
2. 60%; $15\frac{1}{2}$%; $87\frac{1}{2}$%; $28\frac{3}{4}$%; 16%.
3. 120%; 250%; $362\frac{1}{2}$%; $401\frac{1}{2}$%; $637\frac{1}{2}$%.
4. 50%; 25%; 75%; $66\frac{2}{3}$%; 60%; $87\frac{1}{2}$%; $112\frac{1}{2}$%; $93\frac{3}{4}$%.
5. $33\frac{1}{3}$%; 80%; 85%; 36%; 6%; $1\frac{1}{4}$%; $7\frac{1}{2}$%.
6. $2\frac{1}{2}$%; $26\frac{2}{3}$%; $28\frac{4}{7}$%; $12\frac{4}{13}$%; $\frac{1}{2}$%; 25%; 20%.
7. 0.10; 0.6; 0.705; 0.9225; 0.875
8. 0.20; 0.205; 0.8317; 1.44; 2.56.
9. 0.3525; 0.0475; 2.1675; 0.0118; 0.125.
10. $\frac{1}{20}$; $\frac{3}{20}$; $\frac{1}{16}$; $\frac{1}{3}$; $\frac{3}{5}$.
11. $\frac{9}{20}$; $\frac{1}{8}$; $\frac{1}{6}$; $\frac{2}{3}$; $\frac{7}{10}$.
12. $\frac{1}{180}$; $\frac{67}{1000}$; $\frac{3}{7}$; $\frac{20}{9}$; $\frac{15}{16}$.
13. $233.46.
14. $110.
15. 37.10\frac{1}{2}$.
16. $3768.91.
17. $1421.44.
18. $160.56.
19. $68.03.
20. $124.34.
21. 2%.
22. $2\frac{1}{2}$%.
23. 16%.
24. $33\frac{1}{3}$%.
25. 300%.
26. 20%.
27. $133\frac{1}{3}$%.
28. $6\frac{1}{4}$%.
29. 20%.
30. $749 down; $1273.30 at end of first year; $2022.30 at end of second year; $3445.40 at end of third year.

31. 17%.
32. $8.70.
33. 9%.
34. 9500%.
35. 3.58%.
36. 435.
37. 640.
38. 1860.
39. 68,978.
40. 47,316.
41. $87\frac{1}{2}$.
42. 2.
43. 0.48.
44. 450.
45. 76.
46. 318.72%.
47. 125,000; 155,000.
48. $1500.
49. $160,000.
50. 240 bu.
51. 30 gals. spirit; 6 gals. water.
52. 10,879.63 qts.
53. 116.
54. 65.
55. 65.
56. 264.
57. 330.
58. 800.
59. 390.
60. 848.
61. 4.
62. 72.
63. $\frac{8}{11}$.
64. $\frac{1}{4}$.
65. $900.
66. 9 ft. 11 in.
67. $8000.
68. $403.49.
69. 200.
70. 84,000.
71. $5.
72. $10.50.
73. $2.87.
74. $675.
75. Loss, $16\frac{2}{3}$%.
76. Loss, 20%.
77. Gain, 5%.
78. Gain, 12%.
79. $350.
80. $19\frac{1}{21}$%.
81. $120.
82. 12%
83. 16 lbs.
84. $12\frac{8}{11}$%.
85. $21.50.
86. $0.25.
87. $50.
88. $75.
89. $750.
90. $900.
91. $24,000.
92. $14,400.
93. 4 cents per quart.
94. $0.50.
95. $2622.22.
96. $3238.80.
97. $3.50 per yard.
98. $43.75.
99. $600.
100. $15.
101. 15%.
102. $40.
103. $22.50.
104. $2\frac{1}{4}$%.
105. $217.57.
106. $2500.
107. $2000.
108. $9803.92.
109. $125.
110. $912.
111. $3\frac{1}{5}$%.
112. 20,000 sq. ft.
113. $33.75.
114. $32.
115. $1\frac{1}{4}$%.
116. $23,020.
117. $75,000.
118. $6202.50.
119. $15,345.27.
120. $35,013.26.
121. 3826.87\frac{1}{2}$.
122. $80.
123. $76.80.
124. $9000.

No.	Name.	Valuation per Capita.	Tax per Capita.	Tax Rate per $100.
125.	Portsmouth, N.H.	$676	$13.99	$2.07
126.	Dover, N.H.	606	9.18	1.52
127.	Hartford, Ct.	1087	30.29	2.79
128.	Danbury, Ct.	440	5.44	1.24

No.	Name.	Valuation per Capita.	Tax per Capita.	Tax Rate per $100.
129.	Shamokin, Pa.	$67	$3.65	$5.45
130.	Norristown, Pa.	521	6.15	1.18
131.	Toledo, O.	373	13.67	3.67
132.	Steubenville, O.	428	7.10	1.66
133.	La Salle, Ill.	89	6.29	7.05
134.	Elgin, Ill.	211	4.54	2.15
135.	Des Moines, Ia.	195	10.08	5.18
136	Dubuque, Ia.	584	11.73	2.01
137.	Boston, Mass.	1690	21.13	1.25
138.	Baltimore, Md.	734	8.96	1.22
139.	Chicago, Ill.	234	10.16	4.33

140. $720.
141. $1498.36.
142. $960.
143. $1575.00.
144. $950.
145. $4932.
146. $1568.
147. $12,005.
148. $0.69½.
149. $0.74½.
150. $53.09.
151. $74.93.
152. $343.81.
153. $0.011.
154. $0.042.
155. $0.133⅓.
156. $34.70.
157. $14.46.
158. $101.98.
159. $197.04.
160. $14.05.
161. $137.14.
162. $312.50.
163. $2949.75.
164. $1549.69.
165. $115.24.
166. $309.50.
167. $206.64.
168. $380.48.
169. $197.92.
170. $1224.80.
171. $288.37.
172. $1157.46.
173. $7874.42.
174. $1195.11.
175. $8.35.
176. $25.90.
177. $33.37.
178. $36.81.
179. $16.60.
180. $84.88.
181. $646.35.
182. $36.57.
183. $107.82.
184. $181.38.
185. $631.05.
186. $737.97.
187. $3743.64.
188. $2038.72.
189. $641.10.
190. $6330.20.
191. $290.44.
192. 3½%.
193. 7%.
194. 9%.
195. 5½%.
196. 14⅔%.
197. 5%.
198. 6%.
199. 100%.
200. 3 yrs. 5 mos.
201. 2 yrs.
202. 6 yrs. 3 mos.
203. 22 yrs. 2 mos. 20 dys
204. 13 yrs. 4 mos.
205. 13 yrs. 15 dys.
206. 4 yrs. 7 mos. 7 dys
207. 4 yrs. 25 dys.
208. 11 yrs. 3 mos.
209. $12,711.11.
210. $17.785.72.
211. $5909.09.

212. $1926.
213. $6909.97.
214. $4260.
215. $537.50.
216. $17,142.86.
217. $40,000.
218. $8619.05.
219. $750.
220. $1250.
221. $90.90.
222. $2500.
223. $4000.
224. $2420.40.
225. $769.23.
226. $502.76.
227. The former.
228. The latter.
229. $338.
230. $61,702.13.
231. $3\frac{1}{2}$%.
232. $22.49.
233. $100.87.
234. $660.57.
235. $15.28.
236. $75.11.
237. $33.97.
238. $608.81.
239. $424.04.
240. $151.44.
241. $7330.05.
242. $5935.59.
243. $1661.01.
244. $13.76.
245. $178.92.
246. $1088.16.
247. $4053.50.
248. $5653.83.
249. 4.14%.
250. $4\frac{1}{2}$, nearly.
251. 15 yrs. nearly.
252. $14\frac{1}{5}$ yrs. nearly.
253. Jan. 3, 1887; $1996.69.
254. Feb. 6, 1887; $14,569.68.
255. Dec. 6, 1886; $1963.83.
256. Oct. 21; $595.20.
257. Sept. 6; $4799.13.
258. Sept. 8; $1386.77.
259. Sept. 11; $10,259.81.
260. July 17; $4880.42.
261. Dec. 10; $4214.52.
262. Apr. 14; $511.85.
263. Sept. 13; $6218.75.
264. Mar. 19; $123.91.
265. Sept. 6; $337.41.
266. Feb. 4; $24,508.85
267. Nov. 14; $5947.92.
268. June 9; $2976.65.
269. Dec. 28; $6956.35.
270. Sept. 23; $567.58.
271. $5104.65.
272. $1007.94.
273. $3013.81.
274. $608.65.
275. $7906.34.
276. $6016.75.
277. $10,016.67.
278. $20,030.56.
279. $910.94.
280. $925.
281. $476.19.
282. $619.05.
283. $2076.19.
284. $1517.86.
285. $636.73.
286. $1613.08.
287. $913.58.
288. $1684.73.
289. $1637.17.
290. $964.90.
291. $687.91.
292. $1312.87.
293. $4018.43.
294. $1561.14.
295. $1646.09.
296. $904.31.
297. $1092.29.
298. $2325.08.
299. $920.72.
300. $4.61.
301. $159.97.
302. $1080.
303. $1472.50.
304. $63.36.
305. $94.17.
306. $2.03.
307. $94.50.
308. $1.22.
309. $185.25.
310. $116.28.
311. $554.04.
312. $410.06.
313. $3680.
314. $16,485.
315. $35,000.
316. 25 shares.
317. $5520; $360.
318. $2166.75; $108

319. \$700.

320. The income at 6% is greater by \$8.16.

321. \$180.

322. 30.35%; \$4041.25.

323. \$86$\frac{7}{8}$ per share.

324. The $4\frac{1}{2}$% stock.

325. The $4\frac{1}{2}$% stock.

326. No difference.

327. The 8% stock.

328. The 6% stock.

329. The 9% stock.

330. $112\frac{1}{2}$.

331. \$900.

332. \$1875.

333. \$8290; 4.34%.

334. $5\frac{5}{19}$%.

335. \$34,100.

336. \$16,800.

337. \$$133\frac{1}{3}$.

338. \$37,875.

339. $3\frac{7}{31}$%.

340. \$3526.25.

341. \$4018.

342. \$1469.25.

343. \$3941.87.

344. \$2498.75.

345. \$2407.76.

346. \$2389.60.

347. \$4008.

348. £69 5 *s.* $5\frac{1}{4}$ *d.*

349. \$4365.89.

350. 20%; $2\frac{1}{2}$%; 7%.

351. 36 cents.

352. 9.68%.

353. $21\frac{13}{21}$ cts.; $10\frac{39}{103}$%.

354. 97,476.

355. 4 eggs.

356. \$9.

357. 5645.1.

358. 93,641; English, 49+%; Irish, 41+%; Scotch, 9+%.

359. 14,400.

360. 8%.

361. 773,170; 94+%.

362. 16%, very nearly

363. \$62.99.

364. 6 yrs.

365. \$12.50.

366. \$127.50.

367. Mass., 5.3%; N.Y., 4.2%; Ohio, 3.6%; Iowa, 2.4%; S.C., 48.2%; La., 45.8%.

368. 631,697; 173.35%.

369. Increase, 315,576 persons; 32%, very nearly.

370. \$927.50.

371. 2 yrs. 6 mos.

372. \$16,000.

373. Heuser, \$1791.67; Krantz, \$1433.33; Stenck, \$1075.00.

374. Cost of books, \$$1.33\frac{1}{3}$ and \$0.80; loss, \$$0.13\frac{1}{3}$.

375. \$203.42.

376. 52.65%.

377. 6 yrs. 3 mos.

378. $\frac{1}{5}$%.

379. 30 cents; 75%.

380. $33\frac{1}{3}$%; $14\frac{2}{7}$%; $11\frac{1}{9}$%; $9\frac{1}{11}$%; $6\frac{1}{4}$%; 5%.

381. \$147.

382. 421.33.

383. $4\frac{1}{2}$%; 1200.

384. $4\frac{1}{2}$%.

385. $3921\frac{29}{41}$ lbs.

386. \$6526.24.

387. The $4\frac{1}{4}$% stock.

388. \$4875.

389. 40.

390. \$60,000.

391. (i.) 1,748,022; 1,389,445; 619,018; 1,129,691. (ii.) 29.5%; 51.8%; 52.0%; 41.7%.

392. \$25.

393. 74 cents.

394. 25.4%; 12.2%; 16.2%; 12.8%; 9.7%; 8.3%; 11.9%; 2.0%.

395. \$24.80.

396. \$2104.

397. 9000 men.

398. \$103,802,024.

399. 5 dys.

400. \$827.20; $22\frac{44}{45}$%.

401. 6%.

402. \$1060; \$185.50.

403. \$11,198.20.

404. \$1800.

405. $587\frac{1}{6}$.

406. \$731.70; \$18.30

407. \$10.

408. \$376.

409. 25.29%.

410. $475.
411. $513.04; $515.73; $518.45.
412. $6\frac{3}{8}$%.
413. $945.
414. $2654.51.
415. $4272.31.
416. $2087.86.
417. $3.29.
418. $2.
419. Illinois; Ohio and Michigan.
420. 8%.
421. $36.50.
422. $69.56; $2330.44.
423. 4%.
424. $952.
425. $7200.
426. $43\frac{1}{3}$%.
427. 1920.
428. 2400.
429. 2500.
430. $\frac{1}{4}$.
431. 25.
432. The latter.
433. $3047.23.
434. $8\frac{4}{7}$%.
435. 3840.
436. 9%.
437. $3016.59.
438. $416.50.
439. $98.89.
440. $22\frac{22}{45}$%.
441. $1\frac{3}{7}$%.
442. $9.79.
443. $217.49.
444. $3037.50.
445. $1634.06.
446. May 6, 1885; 4 mos. 3 dys.; $8; $326.90.
447. $350.
448. 4200 men.
449. $348.45.
450. $120.
451. $66\frac{2}{3}$.
452. 205 bbls.
453. $6\frac{2}{3}$%; $99.98.
454. $12\frac{1}{2}$%.
455. $537.45.
456. $975.
457. 80 tons.
458. $6917.61.
459. 40%.
460. $5369.62.
461. $1229.25.
462. $15\frac{5}{17}$%.
463. Feb. 2; 1 dy.; $0.17; $1040.15.
464. 5%.
465. 10 mos.
466. $1914.90.
467. $1227.40.
468. 21 yrs. old.
469. $2.50.
470. $512.
471. $271.39.
472. $347.73.
473. $863.40; $36.60.
474. 25%.
475. 25%.
476. $2000.
477. $66\frac{2}{3}$%; $21.60.
478. $9500.
479. $57\frac{1}{4}$%.
480. $1015.
481. $22\frac{1}{2}$ yds.
482. $33\frac{1}{3}$%.
483. Loss, $12.27.
484. £6000.
485. $2121.81.
486. 247+%; 25.2%
487. $1963.83; $36.17.
488. $5622.12.
489. $2000.01.
490. Nov. 18; 10 mos. 3 dys.; $55.62; $888.38.
491. 12%; $33.
492. $1000.
493. $776.35.
494. $12,944.54.
495. $7297.50.
496. $358.31.
497. $1197.45.
498. $1.50.
499. $50.
500. $1218.81.
501. 7%.
502. $498.84.
503. $1800; 30%.
504. 25 cts. per lb.
505. Loss, 4%.
506. $465; $90.
507. 44; 33.
508. $4544.75.
509. $8000; $4000
510. $5500.
511. $29,750.
512. $1481.48.
513. $1277.98.
514. $2996.25.
515. The first; $12,480.

516. \$3002.50.
517. \$3648.17.
518. \$28,119.66.
519. \$2028.29.
520. \$966.25.
521. \$43.19.
522. \$800.
523. \$5280.
524. £1500.
525. £121 5 *s.*
526. 5158.75 francs.
527. $37\frac{5}{51}$%.
528. \$187.50.
529. No difference.
530. \$3800.
531. \$87.50.
532. 90.
533. \$840.
534. \$3053.41.
535. \$92.63.
536. \$25,718.75.
537. \$1.70.
538. \$14.44.
539. \$1758.34.
540. \$8 on \$1000.
541. \$20.
542. \$16,640.
543. \$660; $5\frac{53}{67}$%.
544. \$9812.17.
545. \$4995.
546. 1520 lbs. bone dust; 190 lbs. phosphate; 290 lbs. loam.
547. \$1636.
548. 40% loss.
549. \$325,529.66.
550. \$905.63.
551. \$114.
552. $6\frac{1}{4}$%.
553. 10 horses.
554. \$865.34.
555. \$820.86; \$825.17; \$829.52.
556. \$1.75.
557. \$6.75.
558. \$21,704.75.
559. \$1050.
560. \$245.88.
561. \$9360.
562. \$25,760.
563. \$100.02.
564. \$8140.
565. \$12,121.21.
566. \$135.39.
567. 12.
568. \$17,500; \$25,000.
569. $2\frac{2}{7}$%.
570. \$120.
571. \$21.24.
572. 6%.
573. \$$71\frac{3}{7}$.
574. 15%.
575. \$7680.
576. \$44.01.
577. \$92.
578. \$663.92.
579. 80%.
580. 25%; \$4800
581. \$2010.05.
582. \$3009.02.
583. \$$107\frac{1}{2}$.
584. \$4429.42.
585. $56\frac{1}{4}$% loss.
586. 55.
587. 150; 3000.
588. 68%; \$129,200.
589. \$35,625.
590. \$14.27.
591. 254 A. $104\frac{1}{5}$ sq rds.
592. \$2285.
593. \$385.40.
594. 8.3%.
595. 80.
596. \$16,740.
597. 80.4 cts. per bu
598. \$29,670.33.
599. 3.58%.
600. 80%.
601. 70%.
602. 30%.
603. 90.3%.
604. $66\frac{2}{3}$%; (i.) 20 men; (ii.) 7 men.
605. 68%.
606. The whites.
607. (i.) 37.33%; (ii.) 47.96%.
608. 45%; 47%.
609. For 1884: 73.98%, 15.36%, 10.67%.
For 1885: 72.96%, 16.14%, 10.91%.
610. For 1878: silver 17%, gold 83%.
For 1885: silver 43.4%, gold 56.6%.
611. $9\frac{31}{41}$%.
612. 5%.
613. $\frac{64}{125}$.
614. \$110

615. \$95 and \$65.
616. $1\frac{4}{7}$.
617. France, 45%; Germany, 29%; Cuba, 36%.
618. \$153.12; \$1020.80.
619. $4\frac{1}{6}$%; 4%.
620. $50\frac{2}{3}$ yrs.; $10\frac{5}{7}$%.
621. 0.08%; 1000 long tons.
622. \$27.
623. \$40.67; \$44.75; 3d and 4th, \$46.79 each.
624. 54 cents; 59%.
625. \$10,500,000.
626. Increase, \$90.
627. Increase, \$120.
628. 46 cents.
629. Mass., 221.78; N.Y., 106.74; Ohio, 78.46; Texas, 6.07.
630. $2691\frac{13}{17}$ yds.
631. $286\frac{2}{13}$ mi.
632. $7\frac{9}{13}$ mi.
633. \$966.18.
634. \$57.13.
635. \$48.
636. \$460.
637. \$144; 40%.
638. \$3.45.
639. 21.
640. $3\frac{1}{3}$%.
641. 3600 lbs.
642. Lost, \$132.
643. 2 hrs. 26 min. $56\frac{16}{45}$ sec.
644. \$3.76.
645. $\frac{58}{231}$.
646. 785; 86.62%.
647. 440.
648. $\frac{13}{75}$.
649. $\frac{88}{252}$.
650. $\frac{7}{40}$.
651. The first; \$1.04; $16\frac{2}{3}$%.
652. 210 lbs.
653. B, 24 in.; A, 30 in.
654. 20%; 25%.
655. \$217.97.
656. \$1293.93.
657. $1\frac{1}{4}$%.
658. \$18.20.
659. \$1.11$\frac{1}{9}$; \$337.78; \$608.
660. \$562.02.
661. \$122.73.
662. \$52.75.
663. \$34.31.
664. 9.31 gals. nearly.
665. 5.97%; 103.32 millions of tons.
666. $8\frac{3}{4}$ mi. per hour; 25%.
667. 14.103%.
668. 8.16%; \$384.16.
669. $6\frac{1}{2}$%.
670. $116\frac{1}{2}$ gals.
671. 8.
672. \$1150.
673. \$23.70.
674. $66\frac{2}{3}$%.
675. \$2592.
676. 8%.
677. \$2160.
678. $10\frac{10}{16}$ t.; \$1.50.
679. \$1203.12$\frac{1}{2}$; 125 dys.
680. 5.
681. 25 cents; \$13.70.
682. \$1.50; \$750.
683. $3704\frac{2}{3}$ ft.
684. \$66,818,292.38; \$58,053,702.27.
685. 2,958,596,210 lbs.; 9.72%.
686. 71%.
687. (i.) 46%; (ii.) 31%
688. $1\frac{1}{4}$%.
689. \$1350.
690. 8%.
691. \$20.
692. 1.6%.
693. 9%.
694. \$1050.
695. \$28,000.
696. 12.
697. \$2968.75.
698. 24.
699. \$384; 160 bu.
700. \$1023.80.
701. 13.
702. 60 t.
703. 20%.
704. \$54,000.
705. \$26,600.
706. \$2770; \$125.
707. \$215.
708. $8\frac{1}{3}$%.
709. \$216.
710. 50 shares.
711. \$5.
712. \$73,284.
713. \$2.33$\frac{1}{3}$.

714. $14\frac{3}{7}\%$.
715. $480.
716. $806.
717. $16.50.
718. $137.
719. $60,000.
720. $96.
721. $16.
722. $2060.
723. $160.
724. $28\frac{4}{7}\%$.
725. $5760; $100,000.
726. $45.30.
727. 272 shares and $8.
728. 50%; $1\frac{1}{4}\%$.
729. Increase, $137.50.
730. $9405.
731. $2115.75.
732. $650.50.
733. $1817.03.
734. $14,400; $17,280.
735. $19.
736. $1100; $4900.
737. 50 cts.; 66 cts.
738. $9866.67.
739. $62.63.
740. $1200; $1025.
741. $44,090.
742. 2 yrs. 1 mo.
743. $2253.08.
744. $674.43.
745. From the real estate.
746. $22,045.
747. $8\frac{21}{41}\%$.
748. $12,000.
749. $2420.
750. $304.94.
751. $12,000.
752. $5.50.
753. $947.07.
754. 26,750 lbs.
755. $11,952.
756. $924.37.
757. $0.49; $1.42.
758. $15,750.
759. $752.97.
760. $345.35.
761. $6\frac{2}{3}\%$.
762. 8%.
763. $1800.
764. 400 bu.
765. $12,727.22.
766. 150 shares.
767. $168.48.
768. $5625.
769. $12,672.22.
770. $12\frac{1}{2}\%$.
771. The bank stock.
772. $508.59.
773. $1000.
774. $6765.
775. Lost $12.
776. $11,915.
777. 80.
778. $313.89.
779. $133\frac{1}{3}$.
780. $7500.
781. $12\frac{1}{8}$ cents.
782. $11,000.
783. $278.66.
784. $2763.30.
785. $6200.
786. 4760 bu.
787. $109\frac{1}{11}$.
788. $6\frac{88}{117}\%$.
789. $22\frac{2}{9}\%$.
790. 3 gills.
791. $5.40.
792. No difference.
793. $1669.38.
794. $66\frac{2}{3}$ A.; $2291.66\frac{2}{3}$.
795. Copper, 23.86%; sulphur, 12.06%; oxygen, 30.15%; water, 33.02%; 47.72 lbs. of copper.
796. The Boston merchant paid $412.77 more.
797. $90 increase.
798. $293.91.
799. 40%.
800. 60%.
801. $\frac{1}{6}$.
802. 1 hr. $37\frac{11}{37}$ min.
803. $1128.
804. No. Increase $\frac{67}{105}$ gals. per m
805. $21\frac{11}{24}$ cents per pound.
806. $\frac{23}{45}$.
807. $3.
808. 9 hrs. $38\frac{4}{7}$ min.
809. 4 hrs. 32 min. P.M.
810. 11 hrs. $58\frac{19}{32}$ min. A.M.

811. 9 hrs. 16 min. 48 sec.
812. 14 hrs. 19 min.
813 $40,800.
814. $9\frac{7}{12}$ bu.; 48 hrs.
815. $119\frac{7}{8}$.
816. 1 hr. 1 min. $21\frac{9}{11}$ sec.; 100 gals. and $83\frac{1}{3}$ gals.
817. 3 ft.
818. $4\frac{1}{2}$ mi. per hour.
819. 3 hrs. 11 min. 15 sec.
820. Increase, 50.982 (nearly 51)
821. $288; $384.
822. $39\frac{1}{5}$° F.; $16\frac{2}{3}$° C.
823. $426.26.

CHAPTER VI.

1. 35.
2. 105.
3. $27,000.
4. 1,280,000.
5. 45 men.
6. $21\frac{4}{7}$.
7. $1\frac{1}{2}$ dys.
8. 54 dys.
9. 20 cents.
10. $2800.
11. 75 cents.
12. 24 dys.
13. 6 *d.*
14. $21.06.
15. 5445.
16. 44 ft.
17. 34,314 gals.
18. $97\frac{1}{2}$ lbs.
19. 11 times.
20. $4\frac{3}{4}$ yds.
21. 192 dys.
22. 502,320.
23. 54 spoons.
24. 624 bu.
25. $16\frac{2}{3}$ gals.
26. $14\frac{1}{2}$ ft.
27. 88 teaspoons.
28. $4537.50; $4840; $2722.50.
29. $988; $1490; $1734.
30. $237\frac{1}{2}$ horse-power.
31. $5.20.
32. 75 lots.
33. 4 yrs. 2 mos.
34. 8 min. 23.3 sec.
35. 7 mos.
36. $4590.
37. 1800 lbs.
38. 65 dys.
39. £77 1 s. $4\frac{4}{5}$ *d.*
40. 90 mi.
41. $260.60.
42. £615.
43. 96 ft.
44. 216 ft.
45. $1000.
46. 108 dys.
47. $6.60.
48. 40 dys.
49. $12,600.
50. $444.
51. $16.38.
52. $4.76.
53. 5 men.
54. $1427.40.
55. $804\frac{2}{3}$ lbs.
56. 1365.
57. £87 10 s.
58. $9\frac{1}{7}$ rolls.
59. $13\frac{5}{7}$ yds.
60. $268.80.
61. $362.
62. 10 hrs. 50 min.
63. $12.60 per yard.
64. $48\frac{3}{4}$ yds.
65. 165 mi.
66. $184.
67. $10\frac{1}{3}$ dys.
68. 36 and 54.
69. $85\frac{5}{7}$ and $214\frac{3}{7}$.
70. 156, 260, and 364
71. Copper, 770 lbs.; tin, 210 lbs.; zinc, 20 lbs.
72. $25.20; $28.35
73. 20 cents; $1240.
74. $6039.07; $2228.05; $5378.88; 75.02%

75. $68\frac{20}{23}$, $91\frac{19}{23}$, and $103\frac{7}{23}$.
76. 202.46; 292.43; 350.92; 424.20.
77. $4239.22; $2886.27; $11,274.51.
78. $246.58; $410.96; $345.20; $197.26.
79. $0.555.
80. $1.50.
81. 54 cents.
82. Sand, 7200 lbs.; soda, 1400 lbs.; lime, 1200 lbs.; alumina, 200 lbs.
83. 2.83\frac{1}{3}$.
84. 8 men.
85. 2 men.
86. 4 ft. 7 in.
87. $339.84.
88. $10.64.
89. 15 men.
90. 5 hrs.
91. 141; $666\frac{2}{3}$.
92. 10 boys.
93. 205 dys.
94. Gold, $8\frac{5}{8}$ oz.; silver, $\frac{23}{40}$ oz.
95. $13\frac{1}{3}$ hrs.
96. $5\frac{1}{5}$ dys.
97. 45 men.
98. $12.03.
99. $90.
100. $91.20.
101. 12 horses.
102. $1\frac{16}{69}$ hrs.
103. 51.52 meters.
104. $\frac{1}{3}$ lb.
105. 7 hrs.
106. 11 dys.
107. 38 lbs.
108. 12 oz.
109. $37\frac{1}{3}$ dys.
110. $5000; $7000; $11,000.
111. 40 cents.
112. 260, 390, 520.
113. $3600; $2400; $1200.
114. 15%.
115. $2\frac{2}{13}$ dys.
116. 3000 lbs.
117. Copper, 500 lbs.; zinc, 300 lbs. nickel, 200 lbs.
118. 12 dys.
119. $165\frac{3}{17}$ ft.
120. 2 dys. 18 hrs. 40 min.
121. $40.65.
122. 160 dys.
123. 63 curtains.
124. $4056.82.
125. $3\frac{3}{4}$ mos.
126. $53\frac{1}{3}$ yds.
127. $43\frac{5}{9}$ yds.
128. 11 hrs. nearly.
129. $136.60; $163.92; $229.48.
130. $213.33.
131. 3750 revolutions.
132. $3\frac{1}{16}$ mos.
133. $109.46.
134. $347.31.
135. $335.
136. $8\frac{2}{3}$ cents.
137. $19\frac{5}{6}$ bu.
138. 10 dys.
139. $646\frac{7}{8}$ lbs.
140. $2983\frac{1}{2}$ lbs.
141. $34,598.57.
142. 150 men.
143. $2496.03; $16,800.24; $49,536.73.
144. $9456.66; $11,347.99; $13,002.90; $11,792.45.
145. Copper, $888\frac{8}{9}$ lbs. zinc, $38\frac{6}{13}$ lbs.; tin, $72\frac{76}{117}$ lbs.
146. $17\frac{7}{9}$ A.
147. $22\frac{2}{9}$ oz.
148. $60.
149. $5.15.
150. $425\frac{41}{45}$ bu.
151. 2250 men.
152. $768.
153. 10 horses.
154. $1166.40.
155. $3\frac{1}{5}$%, nearly.
156. 37 mi. per hour very nearly.
157. $10.60.
158. $282.13.
159. $28.51.
160. $1.80.
161. $1\frac{1}{2}$ mi.
162. 81 yds.

163. $10\frac{10}{11}$ dys. **164.** $33\frac{5}{11}$ rds. **165.** 30 hrs

166. Venus, 22 in.; Earth, 31 in.; Mars, 47 in.; Jupiter, 161 in.; Saturn, 293 in.; Uranus, 596 in.; Neptune, 933 in.

167. 2,956,800 A.

168. 42,240,000 ties. 422,400 A.

169. 12,672,000 A.; 19,800 sq. mi.

170. 9 gals.; 1 hr. 54 min.

171. $52.10.

172. 12 pens, 2 penholders, $4\frac{4}{5}$ quires of paper.

173. 1600.

174. 9 dys.

175. $34\frac{3}{7}$ hrs.

176. $81.

177. 4%.

178. $6\frac{1}{2}$ yrs.

179. $240.

180. 8 hrs.

181. $13\frac{1}{3}$ dys.

182. $\frac{80}{107}$ dy.

183. 16 wks.

184. 33 and 27.

185. $250, $375, $875, $1000.

186. Saltpetre, 1008 lbs.; sulphur, $134\frac{2}{5}$ lbs.; charcoal, $201\frac{3}{5}$ lbs.

187. $1\frac{9}{17}$ hrs.

188. $255, $425, $595.

189. 141.66\frac{2}{3}$.

190. 418\frac{1}{2}$, $279, 139\frac{1}{2}$.

191. $20, $50.

192. $1\frac{7}{15}$ ft. per sec.

193. 87\frac{1}{2}$, $120, 202\frac{1}{2}$.

194. Foreman, $60; two men, $55 each; another man, $41.25; the other man, $49.50.

195. 160 men.

196. $36.58, $26.42.

197. $9\frac{1}{31}$ dys.

198. 7\frac{1}{2}$, $12, $7.

199. 120 yds., 160 yds., 200 yds.

200. 113, 339, 678, 791.

201. $35\frac{59}{77}$%.

202. $25, $15, $12.

203. 75 lamps.

204. $6\frac{15}{23}$ dys.

205. 35 dys.

206. Loss, 5%.

207. $57\frac{41}{87}$ A., $40\frac{39}{87}$ A., $91\frac{83}{87}$ A., $10\frac{19}{87}$ A.

208. 54 dys.

209. 51 min. 15.84 sec.

210. $2610.

211. 20 dys.

212. 95°.

213. 15°.

214. $15\frac{5}{9}$°.

215. 84 dys.

CHAPTER VII.

1. 49; 81; 784; 10,000; 1,000,000.

2. 5776; 108,241; 10,201; 10,081,766,464.

3. 0.36; 0.2209; 0.000081; 0.00254016.

4. 81.3604; 772.84; 327.2481; 8101.440064.

5. 2552430.6561; 1296.12960324

6. $\frac{1}{16}$; $\frac{1}{9}$; $\frac{4}{25}$; $\frac{25}{64}$; $\frac{144}{225}$.

7. $\frac{126}{225}$; $\frac{3262}{6724}$; $\frac{11664}{44521}$; $\frac{40401}{400400}$.

8. $5\frac{4}{9}$; $86\frac{11}{49}$; $315\frac{1}{16}$; $22,471\frac{193}{441}$

9. 361; 1,012,036; 0.64; 0.00004; 964.7236; $\frac{5625}{19321}$; $282\frac{103}{121}$.

10. 7569; 9,018,009; 0.010201; 33269.76; 16.008001; $\frac{8281}{47961}$; $40,479\frac{17121}{40000}$.

11. 1; 4; 7; 8; 9; 10; 20.

12. 12; 13; 25; 95; 105.

13. 150; 180; 109; 2001.

14. 0.2; 0.05; 0.0118; 0.6325

15. 2.5; 8.6; 4.05; 16.021.

16. $\frac{1}{4}$; $\frac{1}{3}$; $\frac{2}{5}$; $\frac{4}{7}$; $\frac{5}{6}$.

17. $\frac{18}{21}$; $\frac{25}{30}$; $\frac{305}{601}$; $\frac{291}{303}$.

18. $9\frac{3}{7}$; $27\frac{4}{13}$; $41\frac{31}{35}$; $57\frac{103}{703}$.

19. 23.2.
20. 66.1.
21. 244.5.
22. 935.4.
23. 2278.9.
24. 4521.1.
25. 7.29.
26. 7.02.
27. 10.
28. 3.04.
29. 9.79.
30. 77.79.
31. 2.129.
32. 1.884.
33. 2.879.
34. 0.745.
35. 2.132.
36. 3.995.
37. 2.2803.
38. 2.0012.
39. 2.6824.
40. 55.2555.
41. 3.1485.
42. 4.4633.
43. 349.
44. 350.
45. 2916.
46. 26.
47. 210.
48. 1024.

49. 9409 sq. yds.
50. 150,544 sq. yds.
51. $2284\frac{21}{25}$ sq. yds.
52. 15,376 sq. yds.
53. 43 sq. yds. $3\frac{1}{16}$ sq. ft.
54. 5 sq. yds. 8 sq. ft. $53\frac{4}{9}$ sq. in.
55. 1078 sq. yds. 36 sq. in.
56. 352 sq. yds. 5 sq. ft. 64 sq. in.
57. 531 sq. yds. 5 sq. ft. 4 sq. in.
58. 18 A. 36 sq. rds.
59. 11 A. 89 sq. rds.
60. 9 A. $61\frac{9}{16}$ sq. rds.
61. 5 A. $70\frac{1}{4}$ sq. rds.
62. 13 A. $152\frac{9}{16}$ sq. rds.
63. 1 A. 101 sq. rds. $25\frac{3}{4}$ sq. yds.
64. 26 A. 29 sq. rds. $18\frac{3}{4}$ sq. yds.
65. 14 A. 116 sq. rds. 20 sq. yds.
66. 6 A. 87 sq. rds. $12\frac{1}{4}$ sq. yds.
67. 534 yds.
68. 39 yds. 1 ft. 6 in.
69. 2 ft. 6 in.
70. 1 ft. 6 in.
71. 1 yd. 1 ft. 6 in.
72. 2 yds. $7\frac{1}{8}$ in.
73. 9 yds. 2 ft. $7\frac{1}{2}$ in.
74. 16 yds. 2 ft. 9 in.
75. 6 yds. 1 ft. 9 in.
76. 27 yds. 2 ft. $10\frac{1}{2}$ in.
77. $313\frac{1}{2}$ yds.
78. $258\frac{1}{2}$ yds.
79. 220 yds.
80. 275 yds.
81. 74 rds.
82. 80 rds.
83. 1600 rds.
84. 330 yds.
85. 66 ft. 10 in.
86. $75.60.
87. $1323.
88. 10 ft. 11.521 in.
89. $166.50.
90. 2500.
91. 6 A. 6 sq. rds. $19\frac{1}{2}$ sq. yds
92. 6 sq. ft. 135 sq. in.

93. 14 sq. yds. 6 sq. ft.
94. 99 sq. ft. 95 sq. in.
95. 49 sq. ft. 54 sq. in.
96. 8 sq. ft. $27\frac{3}{4}$ sq. in.
97. 11 sq. yds. 7 sq. ft. 48 sq. in.
98. 7 A. 129 sq. rds. $17\frac{3}{4}$ sq. yds.
99. 1 A. 94 sq. rds. $21\frac{1}{2}$ sq. yds.
100. 2 A. 41 sq. rds. $27\frac{88}{100}$ sq. yds.
101. 22 yds.
102. 17 yds.
103. 23 yds. 1 ft.
104. 121 yds.
105. 11 yds.
106. 72 yds.
107. $85\frac{1}{2}$ yds.
108. 816 yds.
109. 254 yds.
110. 1156.
111. 720.
112. $3240.
113. $789.75.
114. $1134.
115. 80; $132.
116. $499.50.
117. 264 and 208.
118. 7168 tiles.
119. 6 yds. 2 ft. $7\frac{1}{2}$ in.
120. 97 yds. $2\frac{1}{3}$ ft.
121. $24\frac{8}{81}$ yds.
122. $106.87.
123. $37.01.
124. Carpet, $234; paper, $21.75.
125. Carpet, $104.50; paper, $19.45.
126. Carpet, $161.07; paper, $8.36.
127. Carpet, $270.40; paper, $12.60.
128. $6.98.
129. 1 ft. 8 in.
130. Length 40 rds., breadth 8 rds.
131. The square by 225 sq. yds.
132. $108.48.
133. $47\frac{1}{7}$ ft.
134. $28\frac{1}{2}$ planks.
135. 2 ft. 4 in.
136. $270.72.
137. $473.60.
138. 1 sq. ft. 90 sq. in.
139. 622 sq. yds. 2 sq. ft.
140. 9955 sq. yds. 5 sq. ft.
141. 606 sq. yds. 8 sq. ft. 80 sq. in.
142. 121 sq. yds.
143. 7 A. 130 sq. rds.
144. 3 A. 60 sq. rds.
145. 11 A. 40 sq. rds.
146. 25 rds.
147. $41\frac{9}{16}$ sq. yds.
148. 1244 sq. yds. 4 sq. ft.
149. 105 sq. ft. 132 sq. in.
150. 32 A. 18 sq. rds. $23\frac{1}{2}$ sq. yds.
151. 4 A. 48 sq. rds. 27.1 sq. yds.
152. 600 sq. ft.
153. 5460 sq. ft.
154. 9 A. 38 sq. rds.
155. 74 sq. rds. 7.744 sq. yds.
156. 5 ft.; 6 sq. ft.
157. 20 ft.; 96 sq. ft.
158. 135 ft.; 486 sq. yds.
159. 415 ft.; 151 sq. rds. $24\frac{11}{12}$ sq. yds.
160. 43.99 rds.; 2 A. $111\frac{1}{2}$ sq. rds.
161. 50 rds.; $3\frac{3}{4}$ A.
162. 6 ft.
163. 40 ft.
164. 28 ft. 9 in.
165. 880 yds.
166. 1 sq. ft. 6 sq. in.

167. $240\frac{2}{3}$ sq. yds.
168. 1148 sq. yds. $1\frac{1}{24}$ sq. ft.
169. 2 A. $28\frac{3}{4}$ sq. rds.
170. 45 A. $45\frac{3}{8}$ sq. rds.
171. 4 A. $119\frac{79}{125}$ sq. rds.
172. 16.97 ft.
173. 141.421 ft.
174. 19.799 ft.
175. 23 ft. 6.84 in.
176. $109.52.
177. $349.69.
178. 13 ft. 9 in.
179. 36 ft.
180. 57 yds., 76 yds.; 2166 sq. yds.
181. 96 sq. in.; 10 in.
182. $450\frac{2}{3}$ sq. yds.; 21.66 yds.
183. $49\frac{1}{2}$ sq. ft.; 7.106 ft.
184. 1 A. $155\frac{5}{8}$ sq. rds.; $18\frac{1}{8}$ rds.
185. 200 sq. ft.
186. 8664 sq. ft.; 38 yds.
187. 60 ft. and 51.96 ft.
188. 221.696 sq. ft.
189. 3367 sq. yds. nearly.
190. 60 mi.
191. 320 yds.
192. 35 ft.
193. 27.73 ft.
194. 104 sq. in.
195. 7.154 sq. ft.
196. 4485 sq. yds. 3 sq. ft.
197. 800 sq. ft.
198. 400 sq. ft.
199. 1600 sq. ft.
200. $3247\frac{1}{2}$ sq. ft.
201. $45.26.
202. $84\frac{3}{4}$ sq. yds. nearly.
203. Larger by 51.795 sq. ft.
204. 65 sq. yds. 4 sq. ft.
205. 7 sq. ft. 112 sq. in.
206. 1426 sq. yds.
207. 3 A. 81 sq. rds. $29\frac{3}{4}$ sq. yds.
208. 14 A. 130 sq. rds.
209. 10 A. 64 sq. rds.
210. 46 yds.
211. $1638.
212. $624 per acre.
213. 160 rds.
214. 630 sq. yds.
215. $747\frac{1}{2}$ sq. yds.
216. $2467\frac{1}{2}$ sq. yds.
217. 960 sq. ft.
218. $586\frac{1}{2}$ sq. ft.
219. 8 A. 42 sq. rds. $9\frac{1}{2}$ sq. yds.
220. 29 A. 100 sq. rds.
221. $1566.
222. 4896 sq. ft.
223. 41,216 sq. ft.
224. 126 A.
225. 7 A. 26 sq. rds. $12\frac{1}{10}$ sq. yds.
226. 1 A. 79 sq. rds. $6\frac{1}{4}$ sq. yds.
227. 1 A. 102 sq. rds. $18\frac{1}{2}$ sq. yds.
228. 2 A. 149 sq. rds. $14\frac{3}{4}$ sq. yds.
229. 17 A. 93 sq. rds. $6\frac{3}{4}$ sq. yds.
230. 10 A. 144 sq. rds. 5 sq. yds.
231. 187 A. $41\frac{3}{4}$ sq. rds.
232. 2 sq. ft. 100 sq. in.
233. 15 sq. ft. 70 sq. in.
234. 9352.8 sq. ft.
235. 3270.33 sq. ft.
236. 4345.56 sq. ft.
237. 11,110.136 sq. ft.
238. 1119.6 sq. ft.
239. 120°; 90°; 60°; 45°; 36°; 30°.
241. 19.25 sq. ft.
242. $51,960.
243. 78 sq. rds. 23.777 sq. yds.

244. 1453.48 sq. ft.
245. 6.45 ft.
246. 33 sq. yds. 4 sq. ft. 111.6 sq. in.
247. 1739 sq. yds.
248. 485.
249. $7925.05.
250. $131.33.
251. 132 ft.; 1386 sq. ft.
252. 44 ft.; 154 sq. ft.
253. $256\frac{2}{3}$ ft.; $5240\frac{5}{18}$ sq. ft.
254. 48.4 yds.; 186.34 sq. yds.
255. 176 rds.; 15 A. 64 sq. rds.
256. 29 ch. 4 lks.; 6 A. 30,851 sq. ft.
257. 242 yds.; $4658\frac{1}{2}$ sq. yds.
258. 154 ft.; $1886\frac{1}{2}$ sq. ft.
259. $60\frac{1}{2}$ rds.; 1 A. $131\frac{5}{32}$ sq. rds.
260. 363 rds.; 65 A. $81\frac{5}{8}$ sq. rds.
261. $102\frac{2}{3}$ yds.; 7546 sq. ft.
262. $58\frac{2}{3}$ yds.; 273 sq. yds. 7 sq. ft.
263. 21 yds.; 1386 sq. yds.
264. $31\frac{1}{2}$ yds.; $3118\frac{1}{2}$ sq. yds.
265. 63 yds.; 2 A. 92 sq. rds. 11 sq. yds.
266. 2 ft. $5\frac{3}{4}$ in.; 2 sq. rds. 1 sq. ft. $45\frac{5}{8}$ sq. in.
267. 14 yds. 1 ft. 9 in.; 668 sq. rds. 3 sq. ft. 90 sq. in.
268. $9\frac{1}{3}$ yds.; $58\frac{2}{3}$ yds.
269. 44.55 yds.; 279.99 yds.
270. $96\frac{1}{3}$ yds.; $604\frac{3}{14}$ yds.
271. 273 sq. yds. 7 sq. ft.
272. 2 ft. 4 in.
273. 203 A. 101 sq. rds. $24\frac{3}{4}$ sq. yds.

274. $2\frac{1}{2}$ mi
275. $17\frac{1}{2}$ ft. wide.
276. 220 ft.
277. $1091.20.
278. 12.41 ft.
279. 6.2048 ft.
280. $754\frac{2}{7}$ sq. ft.
281. $90.51.
282. $41\frac{2}{3}$ ft.
283. $5\frac{5}{8}$ ft.
284. $8\frac{1}{3}$ ft.
285. $33\frac{4}{5}$ in.
286. 15 in.
287. 25 ft.
288. $41\frac{2}{7}$ ft.
289. 4 ft.
290. 14 ft.
291. 5 ft. 5 in.
292. $69\frac{3}{8}$ ft.
293. 240 ft.
294. $4\frac{1}{6}$ in.
295. 22 in.
296. 11 in.
297. $16\frac{1}{2}$ ft.
298. 14 ft. $7\frac{1}{2}$ in.
299. 45°.
300. $57\frac{3}{11}$°.
301. 4 ft. $4\frac{1}{2}$ in.
302. 132 ft.
303. 4.444 ft.
304. 77 sq. in.
305. 1 sq. ft. $112\frac{2}{3}$ sq. in.
306. 616 sq. ft.
307. $15\frac{5}{7}$ sq. in.
308. 50 sq. in.
309. 42 yds.
310. $102\frac{2}{3}$ sq. ft.
311. 896 sq. ft.
312. $264\frac{1}{7}$ sq. yds.
313. 71.195 sq. yds.
314. 0.63 ft.
315. 154 sq. ft.
316. 26 sq. ft. 106 sq. in.
317. 56,568 in.
318. 41.568 sq. ft.
319. 55.424 sq. ft.
320. 1386 sq. yds. and 2772 sq. yds.
321. $1145\frac{4}{7}$ sq. yds.
322. 104.119 sq. yds.; 116.476 sq. yds..
323. 90 ft.
324. $9000.
325. Increased 16 times.
326. 500 sq. ft.
327. Made $\frac{1}{25}$ as large
328. 15 ft.
329. 10.392 ft.

330. 64; 343; 729; 50,653; 421,875.
331. 59,319; 2,197,000; 21,024,576; 1,000.000; 1,000,000,000.

332. 1,295,029; 8,084,294,343; 1,000,000,000,000; 24,502,711,266,125; 51,440,663,461,045,312.

333. 0.343; 0.024381; 0.000000512; 0.369373484375; 0.001027549183571.

334. 804.357; 15252.992; 52739437.662001728; 512051.841749619683.

335. 4956.477625; 25557661468.416; 2199997732402.325071; 12169.221934782716.

336. $\frac{1}{64}$; $\frac{1}{27}$; $\frac{8}{125}$; $\frac{8}{27}$; $\frac{125}{512}$; $\frac{2744}{3375}$; $\frac{12167}{21952}$; $\frac{287496}{551368}$.

337. $9\frac{258}{343}$; $784\frac{251}{729}$; $6591\frac{51}{64}$; $4,811,922\frac{114148}{141167}$; 1,000,275,701,008$\frac{410880}{500653}$

338. 1; 5; 7; 8; 9.

339. 10; 13; 15; 301.

340. 330; 800; 1001.

341. 0.1; 0.5; 0.4; 0.8.

342. 0.12; 0.007; 0.0219.

343. $\frac{1}{7}$; $\frac{2}{5}$; $\frac{3}{4}$; $\frac{5}{6}$; $\frac{8}{9}$.

344. $\frac{308}{701}$; $\frac{403}{504}$; $8\frac{23}{25}$; $10\frac{31}{45}$.

345. 7.5.
346. 12.7.
347. 20.8.
348. 67.5.
349. 120.8.
350. 800.9.
351. 3.08.
352. 7.43.
353. 4.59.
354. 4.78.
355. 0.52.
356. 1.48.
357. 1.655.
358. 1.146.
359. 0.855.
360. 0.973.
361. 2.153
362. 9.748

363. 27 cu. in.; 54 sq. in.

364. 614.125 cu. in.; 3 sq. ft. $1\frac{1}{2}$ sq. in.

365. 614 cu. ft. 216 cu. in.; 433 sq. ft. 72 sq. in.

366. 381 cu. ft. 135 cu. in.; 315 sq. ft. 54 sq. in.

367. 1 cu. ft. 1016 cu. in.; 8 sq. ft. 24 sq. in.

368. 11 cu. ft. 675 cu. in.; 30 sq. ft. 54 sq. in.

369. 8000 cu. ft.; 2400 sq. ft.

370. 5359 cu. ft. 648 cu. in.; 1837 sq. ft. 72 sq. in.

371. 7 in.
372. 1 ft. 5 in.
373. 2 ft. 6 in.
374. 4 ft. 1 in.
375. 6 t. 1500 lbs
376. 405 sq. ft.

377. 3 ft. 2 in. very nearly.

378. 2 sq. ft. 88 sq. in.; 480 cu. in.

379. $361\frac{1}{8}$ sq. ft.; 16 cu. yds. 25 cu. ft. 54 cu. in.

380. $178\frac{3}{8}$ sq. ft.; 157.78125 cu. ft.

381. $1188\frac{22}{35}$ sq. yds.; 2726 cu. yds. 16 cu. ft. 216 cu. in.

382. $121\frac{1}{2}$ sq. ft.; $91\frac{1}{8}$ cu. ft.

383. 86 sq. ft. 112 sq. in.; 53 cu. ft. 1152 cu. in.

384. 970 cu. in.

385. 3 cu. ft. 1596 cu. in.

386. 59 cu. ft. 360 cu. in.

387. 6 in.

388. $13\frac{1}{4}$ yds.

389. 2250 lbs.
390. $2031\frac{1}{4}$ lbs.
391. 62 sq. ft. 24 sq. in.
392. 15,360.
393. 1 ft. 8 in.
394. $118.30.
395. 7256 lbs. 13 oz.
396. 2682 lbs. $4\frac{2}{3}$ oz.
397. $192\frac{6}{7}$ gals.; 1611 lbs. $5\frac{1}{4}$ oz.
398. 1815 cu. ft.
399. 126.9 cu. in.
400. 1 cu. ft. 1483 cu. in.
401. 1344 cu. ft.
402. 247 cu. ft. 1475 cu. in.
403. 1465 cu. ft. 750 cu. in.
404. 18 cu. ft. 72 cu. in.
405. 5 cu. ft. 1090 cu. in.
406. 124 cu. ft. 54 cu. in.
407. 1540 cu. in.; 3 sq. ft. 8 sq. in.
408. 21 cu. ft. 672 cu. in.;
36 sq. ft. 96 sq. in.
409. 235 cu. ft. 1404 cu. in.;
115 sq. ft. 72 sq. in.
410. 821 cu. ft. 576 cu. in.;
352 sq. ft.
411. 42 cu. ft. 1344 cu. in.;
73 sq. ft. 48 sq. in.
412. 7 in.
413. 20 ft.
414. $5\frac{5}{21}$ cu. yds.
415. $71.30.
416. $1746\frac{2}{63}$ cu. yds.
417. $4.48.
418. $4\frac{1}{5}$ mi.
419. $71.20.
420. 1496 cu. ft.
423. Volumes are as 1 : 36.
surfaces are as 1 : 6.
424. $443.52.
425. 2880 gals.
426. $12\frac{13}{18}$ in.
427. $488\frac{8}{11}$.
428. 16 ft. 6.89 in.
429. $8\frac{1}{4}$ lbs.
430. 1540 revolutions.
431. 13 cu. ft. 445 cu. in.
17 cu. ft. 1169 cu. in.
432. 448 cu. in.
433. 34.64 cu. ft.
434. 935.28 cu. ft.
435. 7648 cu. yds. 5 cu. ft.
436. 33 cu. ft. 576 cu. in.
437. 30,420 cu. yds.
438. 1 cu. ft. 958 cu. in.
439. 3 cu. ft. 1072 cu. in.
440. 384 sq. ft.
441. 5044 sq. ft.
442. 1 cu. ft. 428 cu. in.;
936.74 sq. in.
443. 128 cu. ft. 576 cu. in.;
116.55 sq. ft.
444. 59 cu. ft. 1536 cu. in.;
64 sq. ft. 24 sq. in.
445. 5280 cu. ft.;
1395 sq. ft. $61\frac{5}{7}$ sq. in.
446. 1232 cu. ft.; 550 sq. ft.
447. $526.50.
448. 96.052 sq. ft.
449. 38 sq. ft. 72 sq. in.
450. $27\frac{59}{63}$ yds.
451. $37\frac{5}{7}$ cu. in.; $47\frac{1}{7}$ sq. in.
452. 27,468 cu. yds.
453. 120,800 cu. yds.
454. 90,720 cu. yds.
455. 27,005 cu. yds.
456. $2325\frac{5}{7}$ cu. ft.
457. $383\frac{3}{7}$ cu. ft.
458. 11 sq. ft. 66 sq. in.

459. 430.392 sq. ft.
460. $132.
461. 493.44 cu. ft.
462. $12\frac{37}{84}$ gals.
463. $35.45.
464. 13,312 cu. ft.
465. 22,140 cu. ft.
466. 2 sq. ft. $26\frac{3}{7}$ sq. in.
467. 9 sq. ft. 90 sq. in.
468. 17 sq. ft. 16 sq. in.
469. 154 sq. ft.
470. 1386 sq. ft.
471. 207,222,400 sq. miles.
472. $1437\frac{1}{3}$ cu. in.
473. $22\frac{11}{24}$ cu. ft.
474. $103\frac{831}{648}$ cu. ft.
475. $606\frac{3}{8}$ cu. ft.
476. $2807\frac{7}{24}$ cu. ft.
477. $53\frac{19}{81}$ cu. ft.
478. 38,808 cu. ft.
479. 310,464 cu. ft.
480. 1,047,816 cu. yds.
481. 693 sq. ft.
482. $1140.48.
483. $10\frac{135}{256}$ gals.
484. 18 lbs. $6\frac{9}{14}$ oz.
485. $51\frac{1}{3}$ lbs.
486. $54\frac{37}{64}$ lbs.
487. 29 lbs. $1\frac{2}{3}$ oz.
488. $136\frac{8}{9}$ sq. ft.
489. $7\frac{19}{35}$ oz.
490. $918.72; $52.80.
491. As 216 to 343; $38\frac{1}{9}$ cu. ft.
492. 1 to 16; 1 to 64.
493. $\frac{27}{1331}$; 1,404,928.
494. $\frac{217}{729}$.
495. 2 in.
496. Increased 27 times.
497. $7.20.
498. 3.742 in.
499. 74 yds.
500. $151\frac{1}{4}$ yds.
501. $181.53.
502. 53 yds.; 50.199 yds.
503. $73\frac{2}{27}$ sq. yds.
504. 103.923 ft.
505. $1579.50.
506. 28.284 ft. each.
507. 86.602 ft.
508. 60 ft.
509. $601.56.
510. 3960 sq. yds.
511. $1080.
512. 1629.18 sq. ft.
513. Each side, 75 yds.; altitude, 72 yds.
514. 80 cents per square foot.
515. Square, 225 sq. ft.; triangle, 173.205 sq. ft.
516. Parts, 32 ft. and 18 ft.; areas, 216 sq. ft. and 384 sq. ft.
517. 2 A. 10 sq. rds. $17\frac{1}{2}$ sq. yds.; 2000 sq. yds. and 8000 sq. yds.
518. $25,482.60.
519. 126 sq. yds.
520. 1 A. 77 sq. rds. 3.63 sq. yds.
521. 3 ft. $9\frac{9}{11}$ in.
522. $3\frac{1}{2}$ in. wide.
523. 2 ft. $7\frac{3}{7}$ in.
524. 308 sq. ft.
525. 49.638 ft.
526. 39.598 ft.
527. Square, 1089 sq. ft.; circle, 1386 sq. ft.; triangle, 838.312 sq. ft.
528. $940.61.
529. 50 ft. $4\frac{23}{25}$ in.

530. 28.8 ft.
531. 140,000 cu. ft.
532. 1558.8 cu. ft.
533. 251 4 sq ft
534. 12 53 in
535. 294 lbs. 10⅜ oz
536. $165.
537. 198 oz.
538. 103,488 cu. yds.
539. 10.094 in.
540. 4½ in.
541. 96 ft.
542. $63.65.
543. $37,800.
544. 640.
545. $285,120.
546. B, $21,240.
547. $97.20.
548. 6 yds and 8 yds.
549. 28 ft. and 21 ft.
550. 8.775 ft
551. 336.
552. Carpet, $210 paper, $27.
553. 90 mi.
554. 91.74 ft.
555. 2160.
556. $1866.24.
557. 106¾ yds.
558. $294.
559. 150 balls.
560. $48.38.
561. $7.70.
562. 110 yds. by 88 yds.
563. 11,808 bricks.
564. (i.) 16 sq. yds.;
(ii.) 20.363 sq. yds.;
(iii.) 12.317 sq. yds.;
(iv.) 11.312 sq. yds.
565. 37⅝ sq. yds.
566. 7056; 5 sq. yds. 8 sq. ft. 22½ sq. in.
567. 9⅘ yds.
568. 1694 sq. ft.
569. $979.48.
570. 8.738 in.
571. 6 in.
572. 30,184 sq. yds.
573. Pond's diameter, 198 ft. very nearly; width of garden, 41 ft. very nearly; walk, 31½ ft very nearly.
574. 5354 cu. ft. 859⅜ cu. in.
575. 49 cu. ft. 185⅛ cu. in.
576. 108 lbs. 10 oz. very nearly

CHAPTER VIII.

1. 45.45%.

	1865.	1866.
2. Average deposit, each account,	$205.62	$323.99.
Average deposit per head,	$47.29	$141.64.

3. 62½ cents per quart.
4. The production of grain; 1.62+ in.
5. 39,062½ sq. mi.; 14.2%.
6. 7%.
7. $388.80.
8. 60 lbs.
9. $3900.99
10. 192,000.
11. $2.81.
12. First man, $109.74; second man, $79.26.
13. 11⅓ hrs.
14. 82½ cents.

15. Foreman, $120; two men, $110
the fifth man, $99.
16. $284.90.
17. $508.20.
18. $81.
19. 12,920 lbs. nearly.
20. $70.69.
21. 210 gals.
22. 502,320 times.
23. $2.86.
24. 2 hrs. 24 min.
25. 132.
26. 4000 A.
27. $10.
28. 54 hrs.
29. 16,650 t.
30. $1380.57;
$1656.69;
$1794.74.
31. $691.93.
32. $5899.86.
33. $270,600.22;
8.27%.
34. 618 ft.
35. 10.079 in.
36. 16,384 bricks.
37. $20,666⅔.
38. $385.27 per ton.
39. 17¼ mi.
40. $9\frac{1}{11}$%.
41. 37 : 32.
42. $803.16.
43. $200.
44. $8.20.
45. A, $2383.01;
B, $1949.74;
C, $1516.46.
46. 6¼% gain.
47. $6438.40.
48. $5855.50.
49. 148⅝.
50. 2 ft. 11 in.
51. 35.
52. 1000.
53. 5 mi. 416⅔ yds.
54. $66,000; $1650.
55. $249.42.
56. $80.76.
57. $93.17.
58. 17.93..... years.
59. 3 dys. 5 hrs.
2 min. 9 sec.
60. $9.58; $7.23.
61. $4947.52.
62. 210 nearly.
63. 291.96..... dys.
68.
69.
70. 5¼
71. 145.
72. B gain $2.50.
73. 8 cents.
74. 40 mi. per hour.
75. 55%.
76. 6272 ft.
77. 19.2 meters.
78. Gain, $1\frac{54}{3841}$%.
79. 22 yds.
80. 5 : 2.
81. $552.56.
82. 2 dys.
83. 19 : 26.
84. $13\frac{23}{29}$%; $19\frac{1}{21}$%.
85. ⅚ mi. per hour;
4⅙ mi. per hour.
86. 248⅝ ft.
87. 14%.
88. 150 lbs.
89. 24%.

CHAPTER IX.

1. 1,000,000^{mm}.
2. 40^{hm}, 400^{dkm}, 4000^{m}, 40,000^{dm}, 400,000^{cm}, 4,000,000^{mm}.
3. 830^{cm}, 83^{dm}, 8.3^{m}, 0.83^{dkm}, 0.083^{hm}, 0.0083^{km}.
4. 0.125^{km}; 125,000^{mm}.
5. 1,207,663.19^{m}.
6. 1,144,716^{m}.
7. 13.962^{m}.
8. $18.06.
9. 10107.16^{dm}.
10. 179,960^{cm}.
11. 45,737.

530. 1,000,000^{qmm}, 10,000^{qcm}, 100^{qdm}, 0.01^{qdkm}, 0.0001^{qhm}, 0.000001^{qkm}.
13. 100^{qdkm}, 10,000^{qm}, 1,000,000^{qdm}, 100,000,000^{qcm}, 10,000,000,000^{qmm}.
14. 50304.07^{qm}.
15. 0.25^{qhm}.
16. 0.15457368^{qkm}; 15.457368^{qhm}; 154573.68^{qm}; 15,457,368^{qdm}; 1,545,736,800^{qcm}; 154,573,680,000^{qmm}
17. 39,000,000^{ca}; 390,000^{a}; 3900^{ha}.
18. They are equal.
19. 174.15^{a}.
20. 134.47^{a}.
21. 300,000^{a}.
22. 913,185,126^{ha}.
23. $13,230.
24. $331.94.
25. $200,500; $20.05; $0.2005.
26. $0.0015.
27. $20.
28. 1,000,000^{ccm}.
29. 640^{cbm}.
30. $\frac{1}{5}$.
31. 1002003007.018045^{cbm}.
32. 19,028^{cbm}.
33. 100,000,000^{cmm}.
34. They are equal.
35. 1,019,000^{ccm}.
36. 7063.244^{cbm}.
37. $16.225.
38. $138.46.
39. $765.30.
40. $4758.75.
41. 31,600^{l}; 7240^{l}; 4.015^{l}.
42. 10.004^{hl}.
43. 2408^{cdm}; 22,900^{cdm}, 17.005^{cdm}.
44. 0.50605^{kl}.
45. 105,495^{dl}.
46. 32.2556^{cbm}.
47. 23817.5^{cl}.
48. 22520.45^{dl}.
49. 0.965^{hl}.
50. 403.1^{l}.
51. 4.8925^{hl}.
52. 1,220,000^{ccm}.
53. $142.76.
54. $40.50.
55. 10^{dg}, 100^{cg}, 1000^{mg}.
56. 2040.25^{dkg}
57. 10,300^{hg}.
58. $\frac{1}{200}$.
59. 6000^{dkg}; 2.6 t
60. 10^{kg}.
61. 1000^{kg}.
62. 19.08^{hl}.
63. 20408.105^{g}.
64. 228.2825^{kg}.
65. 90285.45^{g}.
66. 4734.5^{g}.
67. $12.60.
68. 8280^{dkg}.
69. 7½ cents.
70. 6438.425^{m}.
71. $0.65.
72. 13^{qdkm}.
73. The second has 292.92^{qm} more.
74. $0.252.
75. $0.000355.
76. $86.43.
77. $327.375.
78. $1254.09.
79. 4206.1144^{hg}.
80. 7.3415^{dl}.
81. 176^{km}
82. $0.40; $1.60.
83. 7 hrs. 10 min.
84. 407643312.1^{hl}.
85. 4^{cbm}.
86. 4 hrs. 55 min.
87. 13.025^{l}.
88. $21.07.
89. 311610.548^{km}.
90. 932 pieces.
91. $0.987.
92. 9350^{qcm}.
93. $6063.89.
94. 942.66^{g}.
95. 43.5395^{kg}.
96. 25.89^{l}.
97. Gain, $300.
98. 4420^{m}.
99. $106.85.
100. $11,195.28.
101. $70.08.
102. $11,426.83.
103. 475.2^{l}; $807.84
104. $8.
105. 21.565^{dkl}; 215.65^{cdm}.
106. $3.37.
107. $21.27.

108. \$205.13.
109. \$0.079.
110. \$0.805.
111. 57.6^{kg}.
112. 1.5^{m}.
113. Silver, 7480.215^{g}; copper, 948.785^{g}; value, 1685.8 fr.
114. 213 dys.
115. \$23.40.
116. \$29.15.
117. \$975.29.
118. \$1303.75.
119. \$1.31; \$1.20
120. 280.699^{hl}.
121. 21.83^{l}; \$0.972.
122. \$17,542.22.
123. (i.) 18.98^{hl}; (ii.) \$0.194.
124. 807.82^{kg}; \$137.33.
125. \$4.03.
126. 8073^{g}; \$1794.
127. 125^{kg}.
128. 91.907^{a}; 9190.7^{ca}.
129. 0.0175^{qm}; 14.66^{a}; 127.78^{a}; 243.46^{a}.
130. 32.83625^{a}.
131. 125.3^{m}.
132. 23.638^{a}.
133. 29.455^{qm}.
134. 1017.88^{qm}.
135. 4.7124^{m}; 1.7672^{qm}.
136. 1700.89^{a}.
137. 89.367^{m}.
138. 69.12^{m}. 235.72^{a}.
139. 80^{m}.
140. 59.62^{hl}.
141. 12.978^{cbm}.
142. 1700^{kg}.
143. 2.5^{m}.
144. \$262.45.
145. 0.976^{m}.
146. $61,200^{cbm}$.
147. 7441.2^{l}.
148. 24.339^{cbm}.
149. 101.327^{cdm}.
150. 0.422^{st}.
151. 647.06^{kg}.
152. 12^{m}.
153. 10.179^{qm}.
154. 54362^{cbm}.
155. 7.71^{m}.
156. 8.608^{qdm}; 2.375^{cdm}.
157. 39.3706 in.
158. 379.787^{km}.
159. 29.9212 in.
160. 340^{km}.
161. 907.2^{kg}.
162. $3609\frac{3}{8}^{g}$.
163. 19872 bottles

PART SECOND.

ANSWERS TO EXAMINATION MANUAL.

1.

1. Fifteen million six thousand twenty-one, one thousand times.
2. 6,302,446,704.
3. 374, with the remainder 223.
4. 9 times.
5. 88,888 cub. in.
6. 3936 grs.

2.

1. 259,593,710.
2. 360,555,642.
3. 391,525.
4. 10 mi. 205 rds. 15 ft. 11 in.
5. 13 yrs. 6 mo. 1 wk. 6 dys.

3.

1. Ten million seven hundred twelve thousand five hundred twenty-six.
2. 22,265.
3. 771,418.
4. 4763.
5. 64 times.
6. 34 mi. 201 rds. 1 ft. 6 in.

4.

1. 2,020,087.
2. Forty-nine thousand nine hundred fifty. 49,950.
3. 91,132,497.
4. 130,130.
5. 3805 sq. yds.
6. 7000; 5760.

5.

1. 10,083,680.
2. 477,000.
3. 32,643.
4. 15 times.
5. 136 tons 1789 lbs.
6. 3125 sq. ft. 142 sq. in.
7. 5 dwts. 8 grs.

6.

1. 18.
2. 117.
3. 1.
4. 1370 lbs. 10 oz. 18 dwts.
5. $168.75.
6. $266.99.

7.

1. 10 ft. **2.** 2 A. 122 sq. rds. 18 sq. yds. 8 sq. ft. 72 sq. in. **3.** 4° 24′ 6″. **4.** White hat; $0.25. **5.** 95 lbs. 1 oz. 2 dwts. 22 grs. **6.** 9,842,796 sq. in.

8.

1. 15 A. 155 sq. rds. 23 sq. yds. 1 sq. ft. 24 sq. in. **2.** 234,567 grs. **3.** $1524.60. **4.** 725. **5.** 6¼ *d.* **6.** 3 cub. yds. 20 cub. ft. 1455 cub. in.

9.

1. 1028 t. 1 cwt. 3 lbs. 11 oz. **2.** 2 wks. 6 dys. 5 hrs. 52 min. 14 sec. **3.** 1° 55′ 23″. **4.** 10,945 mi. 317 rds. **5.** 765 A. 129 sq. rds. **6.** 29 lbs. 6 oz.

10.

1. 9,017,059,096. **2.** 23 dys. **3.** 99; 119. **4.** 197,127. **5.** 2.308,169,126 sq. in. 6. 18 mi. 230 rds. 2 yds. 2 ft. 10 in.

11.

1. 154,476 in. **2.** 29 lbs. 5 oz. 14 dwts. **3.** 29. **4.** 420. **5.** $\frac{4}{9}$. **6.** 252.8893. **7.** 0.875 gal.

12.

1. 303 yds. **2.** $6.10. **3.** 21. **4.** 1008. **5.** 22. **6.** 18.17. **7.** 2 qts. 1 pt.

13.

1. 5 mi. 5 fur. 2 rds. 5 yds. 2 ft. **2.** 66. **3.** 4. **4.** 1008. **5.** 13$\frac{1}{8}$. **6.** $\frac{13}{16}$. **7.** 3.3252

14.

1. \$0.15. **2.** 143. **3.** 2520. **5.** 100 sq. rds.
4. $1\frac{55}{287}$. **6.** 55,490.244. **7.** 0.469$\dot{4}$ lb.

15.

1. 756. **2.** 216. **3.** $2\frac{9}{10}$. **5.** 4 dys. 12 hrs. 48 min.
4. 1 pk. 1 qt. $\frac{10}{19}$ pt. **6.** 41.2. **7.** 0.0389 long ton.

16.

1. 17. **2.** 6120. **3.** $2\frac{21}{40}$. **5.** 14 bu. 5 qts. $\frac{2}{3}$ pt.
4. $\frac{1}{3}$ of 4; by $\frac{1}{12}$. **6.** 0.5285$\dot{3}$.

17.

1. $\frac{18}{35}$. **2.** 16.25. **3.** $\frac{61}{200}$. **4.** $10\frac{1}{4}$. **5.** 25; 7875. **6.** $\frac{14}{27}$.

18.

1. $\frac{2}{3}$ of $1\frac{1}{5}$; by $\frac{1}{20}$. **2.** $16\frac{23}{88}$. **3.** $3\frac{13}{30}$; $\frac{17}{30}$. **5.** 0.0036.
4. 0.0858; 0.00858; 0.858; 0.000858. **6.** $\frac{3}{400}$.

19.

1. 7. **2.** $\frac{1}{3}$. **3.** $1\frac{5}{9}$. **4.** 4700. **5.** 0.4$\dot{3}\dot{6}$.
6. 10 sq. rds. 12 sq. yds. 129.6 sq. in. **7.** $\frac{8}{13}$.

20.

1. $\frac{1}{42}$; $\frac{1}{56}$; $\frac{17}{72}$; $\frac{5}{18}$. **4.** 21.7568.
2. 1 yd. 1 ft. $8\frac{1}{10}$ in. **5.** 0.848. **6.** 0.1875.
3. $\frac{1}{11}$ gal. **7.** 3 rds. 2 ft. $11\frac{3089}{8125}$ in.

21.

1. £58 18*s*. $11\frac{19}{55}$*d*. **3.** $\frac{19}{112}$. **4.** $\frac{1}{3}$.
2. 100; 0.01. **5.** 16; 26,928. **6.** 256.

22.

1. 3960. 2. $\frac{25}{33}$. 3. $80\frac{3}{8}$. 5. 3 hrs. 6. 1.6; 16; 0.16.
4. By finding if the sum of the digits is divisible by 3.

23.

1. 1 wk. 10 hrs. 25 sec.
2. $\frac{5355}{7144}$. 3. $19\frac{7}{26}$.
4. $26\frac{47}{78}$. 5. $16\frac{97}{1800}$. 6. $5148.
7. $\frac{3}{8}$.

24.

1. $2.0\dot{4}\dot{5}$. 2. $0.9442708\dot{3}$. 3. 486. 4. $\frac{1}{7}$. 5. 104. 6. $\frac{7}{18}$.

25.

1. 1. 2. $\frac{283}{348}$. 3. 6 dys.
4. $2.625 \div 7$; 5×0.05; 2.5×0.075.
5. $\frac{36}{37}$. 6. $0.0\dot{1}3\dot{2}$.
7. 0.21875.

26.

1. 108 cub. in. 2. 3.
3. $\frac{1}{880}$. 4. $2\frac{5}{18}$. 5. 0.0073.
6. $\frac{161}{300}$.
7. 0.163; 0.163, 0.036, 0.005868.
8. 0.02; 35; 6.056.

27.

1. $10.64 = 10\frac{16}{25}$.
2. 0.0234375.
3. 14 A. 20 sq. rds. 12 sq. yds. 129.6 sq. in.
4. $1530.94.
5. 1 hr. 36 min.
6. 3 hrs. 52 min.

28.

1. 6 min. 2. $\frac{1}{5}$. 3. $5\frac{1}{55}$. 4. 1. 5. $\frac{1}{8}$. 6. 609,840.

29.

1. 2 mi. 72 rds. 4 yds.
2. 1584 yds.
3. 2 A. 10 sq. rds. 17 sq. yds. 4 sq. ft. 72 sq. in.
4. 23 cub. yds. 17 cub. ft. 620 cub. in.
5. $\frac{1}{14}$. 6. $\frac{1}{11}$.
7. 11 cwt. 110 lbs.

30.

1. 28 A.
2. 31 bu. 2 pks. 4 qts.
3. 7 dys. 19 hrs. 10 min. 56 sec.
4. 25 gals.
5. 13.
6. 1.076875.
7. 365 dys. 5 hrs. 48 min. 47.6352 sec.

31.

1. 1800.
2. $4\frac{2}{45}$.
3. 12 min.
4. 1.
5. 6 hrs.
6. 32.16; 321.6.
7. $2.8\dot{4}$.

32.

1. $0.\dot{0}\dot{9}$.
2. $0.42.
3. 84 rds.
4. $0.0013\dot{2}5\dot{7}$.
5. 123.274+ grs.
6. $13{,}153{,}066\frac{2}{3}$ cub. ft.

33.

1. $1\frac{47}{150}$.
2. $\frac{1}{16}$.
3. 12,462 mi. 313 rds. 2 ft. 10 in.
4. $\frac{5}{8}$.
5. 10.
6. 480.
7. 1540.

34.

1. 2 qts.
2. 61 long tons 196 lbs.
3. 0.00035 A.
4. 211 dys. 16 hrs. 48 min.
5. 7 lbs. 3 oz. 12 dwts.
6. 23; 23,023.
7. $10\frac{5}{24}$.

35.

1. 57.8948.
2. 0.235.
3. 3564 yds.
4. 2 dys. 1 hr. 55 min. 12 sec.
5. $144\frac{4}{9}$ lbs.
6. 11 hrs.
7. $\frac{2}{3}$.

36.

1. 8.495 ch.
2. 100 A. 3 R. 17 sq. rds.
3. $3\frac{251}{630}$.
4. 0.15625.
5. $1209.88.
6. $269.06.

37.

1. $0.31\frac{27}{43}$.
2. $7.20.
3. 198; 171; 81.
4. $4\frac{23}{28}$.
5. $1\frac{8}{61}$.
6. $\frac{11}{15}$.
7. 0.64821.

38.

1. 16,985 lbs. 12 dwts. **5.** $3\frac{11}{13}$. **6.** 6.65917.
2. $2\frac{7}{8}$. **3.** 150,652.44. **7.** $4905.
4. 2 A. 129 sq. rds. 21 sq. yds. 6 sq. ft. 78 sq. in.

39.

1. 281 rds. 1 yd. 6 in. **4.** £2567 10*s.* $11\frac{1}{16}$*d.*
2. $\frac{3}{5}$. **3.** $0.3\dot{2}\dot{7}$. **5.** 0.2149305. **6.** 1300. **7.** $1\frac{79}{81}$.

40.

1. 0.21875. **2.** $8\frac{29}{45}$. **5.** 120 sq. yds. 8 sq. ft. 32 sq. in.
3. $370,703.12½. **6.** 34.114. **7.** $1\frac{22}{85}$
4. 3795 min.

41.

1. 9 A. 29 sq. rds. 26 sq. yds. 6 sq. ft. 82 sq. in. **2.** 19*s.* 2½*d.* nearly. **3.** 13 ft. **4.** $\frac{2}{7}$. **5.** $\frac{179}{280}$. **6.** 49,000.

42.

1. 10 yds. 11 in. **3.** $5\frac{13}{51}$. **4.** 2.
2. 302.468. **5.** 2.115. **6.** $258.87½.

43.

1. $\frac{19}{144}$. **2.** 1 A. 75 sq. rds. **5.** $\frac{22}{123}$, $\frac{21}{122}$, $\frac{20}{121}$.
3. 20,542.5. **6.** A, $37\frac{1}{3}$; B, $26\frac{2}{3}$.
4. $1\frac{7}{18}$; $\frac{1}{2}$; $1\frac{89}{282}$. **7.** $6\frac{3}{4}$ mi.

44.

1. 9.8202. **2.** 0.3421575. **6.** 3 A. 20 sq. rds. 12 sq. yds. 7 sq. ft.
3. 148.279. **4.** $2\frac{2}{3}$.
5. 3 dys. 10 hrs. 56 min. 24 sec. **7.** 38 lbs. 11 oz. 6 drs. 2 sc. 7 grs.

45.

1. 34.65925 cub. in.; 20+ oz. **4.** 524.16231.
2. $\frac{19}{20}$. **3.** $\frac{1}{8}$. **5.** 0.7003005. **6.** $2.50.

46.

1. $30.40. **2.** $\frac{24}{119}$. **5.** $112\frac{11}{12}$. **6.** $2\frac{23}{48}$.
3. $143.29. **4.** $17\frac{121}{416}$. **7.** 37,026 ft.

47.

1. $\frac{194}{33}$. **2.** $\frac{43}{44}$. **5.** 286 dys. 17 hrs. 18 min. 36 sec.
3. 13,000; 13.
4. $\frac{8}{15}$; $\frac{163}{16500}$. **6.** 0.00390625.

48.

1. $0.968819\dot{4}$. **2.** $26\frac{2609}{4800}$. **4.** A, $\frac{3}{40}$; B, $\frac{19}{280}$; C, $\frac{2}{35}$.
3. £5. **5.** $16.56. **6.** $\frac{9}{112}$.

49.

1. $236.42½. **4.** 1201 mi. 169 rds. 4 yds 10 in.
2. $\frac{11}{25}$.
3. 239.97 dwts. **5.** 0.216. **6.** 71,498.

50.

1. 10.154875. **3.** $\frac{11}{9}$. **4.** $2\frac{3}{70}$ dys.
2. 16.01168. **5.** 24 lbs. **6.** 34.83145.

51.

1. $3\frac{6523}{7686}$. **2.** $28\frac{6}{23}$ min. **4.** 750 men. **5.** 4010.
3. $821.25; $41.25. **6.** $\frac{9}{17}$, $\frac{11}{21}$, $\frac{13}{25}$, $\frac{7}{15}$.

52.

1. $22.60. **3.** $\frac{1033}{99900}$. **4.** $\frac{17}{18}$.
2. 0.202; 2.02; 0.00202; 0.0000202. **5.** 699.
6. $599.63.

53.

1. \$0.33$\frac{1}{3}$. 2. 421.
3. 10.998; 0.0101.
4. 8.
5. 1 qt.
6. The train wins by 1 minute, and by $\frac{1}{8}$ of a mile.

54.

1. 1.2; 0.12; 120; 0.012.
2. 21.2. 3. \$105.
4. \$600; \$400; \$300.
5. 24 dys. 6. \$150; \$105.

55.

1. 625. 2. $\frac{1}{4}$.
3. \$21.
4. 36 men. 5. 210.
6. \$3066.67. 7. \$215.

56.

1. 4.775. 2. $\frac{29}{76}$; $\frac{20}{59}$.
3. 0.173; 700; 0.00001.
4. 4.71. 5. At \$1.02, nearly.
6. \$18.06.

57.

1. 7313.
2. $\frac{1}{3}$; $\frac{1}{70}$.
3. $118\frac{2}{11}$ per cent.
4. \$137.50.
5. 13; 1100; 0.1.
6. 2.03.

58.

1. \$71.20.
2. 315.
3. $\frac{18}{148}$.
4. 0.02265625; 0.003625, 0.00003625, 0.3625.
5. \$0.26$\frac{1}{2}$. 6. \$2.

59.

1. \$60, \$40, \$30, \$24.
2. $18\frac{3}{4}$ dys. 3. \$25.50.
4. \$450. 5. $\frac{11}{8000}$; $\frac{1}{88}$; $7\frac{17}{88}$.
6. A, by $7\frac{1}{2}$ min.

60.

1. $37\frac{1}{2}$ per cent.
2. \$12.54.
3. \$4600. 4. 120,120.
5. $\frac{29}{188}$. 6. 70 dys.

61.

1. 22. 2. $\frac{5}{16}$.
3. $\frac{49}{800}$; $\frac{49}{896}$.
4. $136\frac{8}{9}$ yds.
5. \$1549.55. 6. \$0.07$\frac{1}{2}$.

62.

1. 480 A. 2. 1703.
3. $552\frac{1}{2}$ cub. ft.
4. $5\frac{20}{61}$ per cent. 5. 77°.
6. 3.

63.

1. $\frac{3}{11}$; $\frac{1}{16}$.
2. 0.04; 0.015625; 0.790625.
3. $8\frac{1}{4}$ mi. 4. $46\frac{2}{3}$ yds.
5. 135 ft. 6. 3 for 2 cts.

64.

1. 0.0164.
2. \$31.87$\frac{1}{2}$.
3. \$8.96.
4. 0.02734375; $\frac{412}{8888}$.
5. 134.5; 0.015.
6. 2520.

65.

1. $\frac{13}{60}$. 2. 6 dys.
3. 0.0084; 0.84; 840.
4. \$4.20. 5. \$5000.
6. 16 yds.

66.

1. \$146.37. 2. \$245.
3. He gained \$9.
4. 2040. 5. 6199.
6. 4*s*.

67.

1. \$12.81.
2. 176 yds.
3. $2\frac{1}{30}$. 4. \$190 gain.
5. \$25.62$\frac{1}{2}$. 6. $\frac{25}{81}$.

68.

1. 2520. 2. 75.
3. \$180.50. 4. 10,000.
5. 12 dys.
6. 6 per cent.

69.

1. \$10 gain. **2.** 25 per cent. **4.** $1\frac{4}{5}$. **5.** 1.0003.
3. 2500; 1 lb. 14 oz. **6.** Nothing.

70.

1. $9\frac{4}{5}$ per cent. **2.** \$3.75. **5.** 3 yrs.
3. \$98.56. **6.** 44 sq. yds. 5 sq. ft.
4. 55 A. 73 sq. rds. 28 sq. yds. 5 sq. ft. 78 sq. in.

71.

1. 27 miles per hour. **3.** A \$240, B \$480; 20 %.
2. \$175. **4.** 1680. **5.** $\frac{3}{7}$. **6.** 14.

72.

1. \$260. **2.** \$3000. **3.** \$1530. **4.** \$297.49.
5. 0.57004987+; 570,049.87+. **6.** $\frac{25}{144}$.

73.

1. £30 14*s.* $8\frac{2}{5}$*d.* **2.** 8. **4.** \$21.47.
3. 165 men. **5.** 3000 men. **6.** $7\frac{7}{20}$.

74.

1. $\frac{7}{15}$. **2.** \$600. **5.** 1460 rds.
3. 15 days. **4.** 349. **6.** The same.

75.

1. 83 ft. 5 in. **4.** \$4802.77.
2. \$79.46. **5.** $\frac{107}{117}$; $\frac{13}{21}$.
3. Gain $3\frac{1}{8}$ per cent.
6. By finding if the difference between the sum of the digits in the even places and the sum of the digits in the odd places is 0, or a multiple of 11.

76.

1. \$14,468.50. **3.** 0.007252. **4.** \$468.75.
2. $13\frac{1}{2}$ in. **5.** \$97.16. **6.** 5.

77.

1. 759 tiles. **2.** 0.526. **5.** 4 horses.
3. \$3.36. **6.** 2 wks. 11 hrs. 26 min. 24 sec.
4. £1449.

78.

1. 36,500. **3.** $128\frac{10}{13}$. **4.** 512. **5.** 6.
2. 80 per cent. **6.** 208 A.

79.

1. 18,495,000. **3.** Increase \$52.50.
2. Gains $5\frac{85}{128}$ per cent. **4.** 1.794.

80.

1. $12\frac{8}{9}$ hrs. **2.** 30 min. **3.** \$937.66. **4.** \$$10.55\frac{5}{9}$.

81.

1. 200.23 ft. **2.** 0.008. **3.** \$144.50. **4.** 28 hrs. **5.** 1.

82.

1. 3024. **2.** 1. **3.** 11 mo. **4.** \$22.50. **5.** \$5.25.

83.

1. 10,192,000 gals. **2.** 8*d.* **3.** 480. **4.** 297 ft. **5.** 4.

84.

1. £27 12*s.* $5\frac{3}{10}$*d.* **3.** \$180.
2. 154 yds. **4.** \$120. **5.** 474,240.

85.

1. \$3750; \$7.50 loss.
2. 25 min. 3. $\frac{2}{625}$.
4. \$40; $12\frac{1}{2}$ per cent.
5. $42\frac{3}{4}$.

86.

1. $\frac{21}{22}$. 2. 29 rds. 3 yds. 3. $\frac{7}{11}$. 4. \$455. 5. $28\frac{1}{8}$.

87.

1. 20 per cent increase.
2. $\frac{9}{1400}$. 3. 40.2175.
4. 1039; 0.3285, etc.
5. \$127.50.

88.

1. 8.3612. 2. \$36.67.
3. \$88.55.
4. 5 per cent stock at $102\frac{3}{4}$.
5. \$174,735.

89.

1. $3\frac{1}{3}$ per cent. 2. $33\frac{1}{3}$.
3. 64 times.
4. 1 mi. 130 rds. 5 yds. 6 in.
5. 77 yds. 2 ft. 11 in.

90.

1. 45 mi.
2. 2728 A. 126 sq. rds. 8 sq. yds. 6 sq. ft. 108 sq. in.
3. 7 to 9.
4. $57\frac{1}{7}$ per cent.
5. $0.\dot{1}\dot{2}$; $0.\dot{1}\dot{7}1428\dot{5}$; $0.1\dot{4}\dot{5}$.

91.

1. $6\frac{9}{16}$ s. 2. $108\frac{1}{2}$.
3. $\frac{111}{421}$.
4. $\frac{1}{8210}$. 5. $0.\dot{0}0099\dot{9}$.
6. $3\frac{37}{81}$.

92.

1. $92\frac{4}{13}$. 2. $9172\frac{124}{155}$ mi.
3. 50 per cent.
4. A \$245, B \$175, C \$210.
5. $685\frac{5}{7}$.

93.

1. 18,900 to 17,303.
2. $2\frac{1}{2}$ per cent nearly.
3. $430.25.
4. 0.080025.
5. 24 cub. ft. 810 cub. in.
6. 11.

94.

1. $\frac{157562}{275581}$. 3. $551.25.
4. 61.87\frac{1}{2}$. 5. $27,088.42.

95.

1. $4328.13.
2. 0.03671875.
3. 2134.
5. 1.7099.
4. Thirty million two hundred seventy-two thousand four hundred seconds.

96.

1. 1925 lbs. 2. $2000.
3. 35 sq. ft. 75.84 sq. in.
4. $394.10.
5. 20 per cent.
6. 119 A. 66 sq. rds. 12 sq. yds. 2 sq. ft. 36 sq. in.

97.

1. 6 yrs. 1 mo.
2. 324; 216; 162.
3. 1 mi. 1 rd. 1 ft.
4. 55,296.
5. $1262.31.
6. 0.9486.

98.

1. 48 cts.
2. 7 hrs.
3. 74 cts. 4. 0.8220.
5. $6\frac{28}{37}$ per cent.

99.

1. $47.57.
2. 7 per cent, nearly.
3. $7999.50.
4. 3 mos. 9 dys.
5. $4474.58.

100.

1. 65 cts.
2. 9053.37\frac{1}{2}$.
3. $\frac{5}{9}$; $\frac{13}{48}$; $0.2847\dot{2}$.
4. 10.77+. 5. 4.358899.

101.

1. 2125. **2.** 384 cords. **5.** $4736.84.
3. $5\frac{5}{9}$. **4.** 32 per cent. **6.** 97 barrels; $4.33 left over.

102.

1. 993.871[1]. **2.** $57.58. **4.** $587.75.
3. $8\frac{2}{7}$ mo. **5.** 0.9085. **6.** 3 dys.

103.

1. 50 min. **3.** $20,991.60. **4.** 4.91\frac{2}{3}$.
2. $29.84 decrease. **5.** 0.6694.

104.

1. $500,000. **3.** 5 to 4. **4.** $154.06.
2. $783. **5.** 0.44721.

105.

1. 120,000. **3.** $117.30. **4.** 2.924.
2. 2340 lbs. **5.** 3.13, nearly.

106.

1. $2107.50. **2.** 72. **4.** 5 ft. $5\frac{1}{5}$ in., nearly.
3. $22.22. **5.** $59\frac{1}{4}$; $35\frac{3}{4}$; 5.

107.

1. 3 ft. 9 in. **3.** 3380. **4.** $151.89.
2. 385. **5.** $\frac{11}{12}$ of an inch.

108.

1. He gains $5\frac{85}{128}$ per cent. **3.** 9, 5, 1, 6; or 5, 9, 6, 1.
2. 10,440.54. **4.** 2.714. **5.** $10\frac{1}{11}$ mi.

109.

1. 3 yrs. 6 mos. **2.** $9\frac{1}{2}$ mi. **5.** 6,336,000 cub. ft.
3. 5 men. **4.** $600. **6.** 0.1259.

110.

1. $1\frac{11}{16}$ hrs.
2. 58.786 sters.
3. $50\frac{259}{481}$ min. past 3.
4. 1200.
5. $18\frac{3}{4}$ per cent gain.
6. 230.45.

111.

1. 26 A. 123 sq. rds. 29 sq. yds. 2 sq. ft.
2. 45 men.
3. 10 hrs.
4. 10,861,577.
5. 1.2695^{cbm}. **6.** $3\frac{19}{27}$.

112.

1. 72 gals. **3.** 5 mi. **4.** $6.02. **5.** $\frac{1}{8}$.
2. 0.0316; 0.7071; 0.01; 0.0009.

113.

1. 108; 14,826,240.
2. 490,000; 0.0049.
3. $30. **4.** 9 men.
5. $3032.79. **6.** 100^{ha}.

114.

1. 6562.5^{l}; 5998.125^{kg}.
2. $1\frac{1}{2}$ hrs.
4. Gain 5 per cent.
5. 400. **6.** 4.395.

115.

1. $13\frac{1}{3}$ min.
2. 1 ton $604\frac{1}{3}$ lbs.
3. 1.0936, nearly.
4. 45,816.11479.
5. 1.337 per cent on the cost of the second kind.

116.

1. 4754.78^{kg}.
2. 3 sq. yds. 29 sq. in., nearly.
3. 72. **4.** 90.
5. 186 lbs. 14 oz.

117.

1. \$1.25. **2.** 121. **3.** 4000. **4.** \$2890.50. **5.** \$36.67.

118.

1. 24. **2.** 25 per cent. **3.** 320^{m}. **4.** \$614.12½. **5.** 18¾ A.

119.

1. 119 A. 66 sq. rds. 12 sq. yds. 2 sq. ft. 36 sq. in.
2. 1^{s}; 1^{kg}; 1^{t}; 2.11.
3. 1320 yds.
4. 0.00071.
5. 4 qts.

120.

1. 43¼ A. **2.** 0.27 pts.
3. \$945.
4. A \$90, B \$75, C \$105.
5. 61.89.

121.

1. 7.92^{km}. **2.** \$63.72.
3. $7\frac{161}{625}$ in.
4. \$4.10.
5. 27 men.

122.

1. \$919.63. **2.** 18 men.
3. 102.6^{kg}; 91.5^{kg}.
4. 2 ft. 1⅘ in., nearly.
5. \$13,911.11.

123.

1. \$282. **2.** 85⅝ per cent.
3. $59\frac{65}{77}$. **4.** 1.256, nearly.
5. 42 sq. rds. 22 sq. yds. 6 sq. ft. 27 sq. in.

124.

1. 34 dys.
2. 0.4427. **3.** 3.
4. 64.28 sec., nearly.
5. 14.18^{qm}.

125.

1. 7½ cwts.
2. 80 men. **3.** $\frac{1}{24}$.
4. Increased by \$29.51.
5. \$54.84.

126.

1. 12.48^{km}. 2. 18 horses. 4. \$7781.42.
3. $12\frac{1}{6}$ per cent, nearly. 5. 248,832.

127.

1. 636. 2. 100,800 gals. 4. $14\frac{2}{7}$ per cent.
3. Lost $1\frac{3}{7}$ per cent. 5. 1.034.

128.

1. 1024. 3. \$89.15. 4. $8\frac{97}{166}$ dys.
2. 19 men. 5. 4 hours.

129.

1. 0.032^{mm}. 4. 8 dwts. $9\frac{8}{16}$ grs.
2. \$2.89. 3. \$4675. 5. $\frac{107}{199800}$.

130.

1. A \$2.98, B \$11.92, C \$10.72. 2. 600 steps. 3. 70.. 4. 71 cts. 5. 7.59.

131.

1. $\frac{144}{175}$; $\frac{175}{192}$. 3. 1.452^{kg}. 4. \$238.
2. $52\frac{73}{476}$. 5. \$510.46.

132.

1. \$1001.25. 3. 2415. 4. $\frac{17}{68}$.
2. \$500. 5. 6.45148^{qcm}; 2.47110 A.

133.

1. 8 per cent. 3. 12 ft. 4. \$75.
2. 47 hrs. 3 min. 20 sec. 5. 16.38662^{ccm}; 3.62446st.

134.

1. 90. 2. $\frac{3}{2}$. 4. 20 per cent.
3. 2.20462 lbs.; 2204.62 lbs. 5. 0.3162.

135.

1. 9009.
2. 7.309.
3. 45 men.
4. £9.
5. 900,000.

136.

1. $75.
2. 90 cts.
3. 2.53998^{cm}; 1.60933^{km}.
4. 1.9660.
5. 415 lbs.

137.

1. $64\frac{121}{375}$.
2. 400 men.
3. 40 min.; $16\frac{2}{3}$ miles from one station, $23\frac{1}{3}$ miles from the other.
4. $59.06.
5. 2^{ha} 25^{a}.

138.

1. 70.07.
2. $50; $4\frac{1}{6}$ per cent.
3. $16\frac{176}{189}$.
4. 45 min. 41.2 sec.
5. $58,536\frac{24}{41}$ lbs.

139.

1. $2754.
2. 47 yds.
3. $1.56.
4. 5 ft. 3 in., nearly.
5. $12.

140.

1. $3.39.
2. 1.27421^{cbm}.
3. $314\frac{1}{2}$ cub. ft.
4. $57\frac{41}{87}$, $40\frac{29}{87}$, $91\frac{83}{87}$, $10\frac{39}{87}$ A.
5. 982.

141.

1. $5\frac{3}{4}$ per cent gain.
2. 9 men.
3. $275\frac{1}{2}$ yds.
4. $23\frac{3}{8}$ mi.; $20\frac{7}{9}$ mi.
5. 158.27735^{t}.

142.

1. 5 per cent.
2. £12,600,000.
3. 750^{l}; 1380^{kg}.
4. $5\frac{345}{511}$ per cent.
5. $\frac{1}{48}$.

143.

1. 95. **2.** $127.61. **3.** $100. **4.** $5.30. **5.** $22\frac{1}{2}^{\text{cl}}$.

144.

1. $163.94. **2.** $181.48. **3.** $15.05. **4.** 18. **5.** $196\frac{1}{8}^{\text{kg}}$.

145.

1. Edge, 49 in.; diagonal, 84.87 in.
2. $15\frac{1}{17}$ oz.; $6\frac{1}{4}$ per cent.
3. $72\frac{2}{5}$. **4.** $3000.
5. 370 A. $105\frac{95}{121}$ sq. rds., nearly.

146.

1. 40 cents; $12\frac{1}{2}$ per cent.
2. $2244.37. **3.** 7 cents.
4. $600.96, nearly.
5. 538 ft. 10 in.

147.

1. 29.7 yds. **2.** 600 ft.
3. $6\frac{133}{576}$ min. past 10.
4. $937.66.
5. 183.267735 tons.

148.

1. 56 hrs. **2.** 750.
3. 2.2234.
4. 9.738 francs, nearly.
5. $36.76.

149.

1. $29.70. **2.** $390.15. **3.** 10 in. **4.** 0.6299. **5.** 45.721.

150.

1. 75,902.4 lbs. **2.** 700 ft.
3. £174 10*s.* $8\frac{77}{80}$*d.*
4. $1633\frac{1}{2}$ tons.
5. 0.89078^{1}; 434.22^{g}.

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